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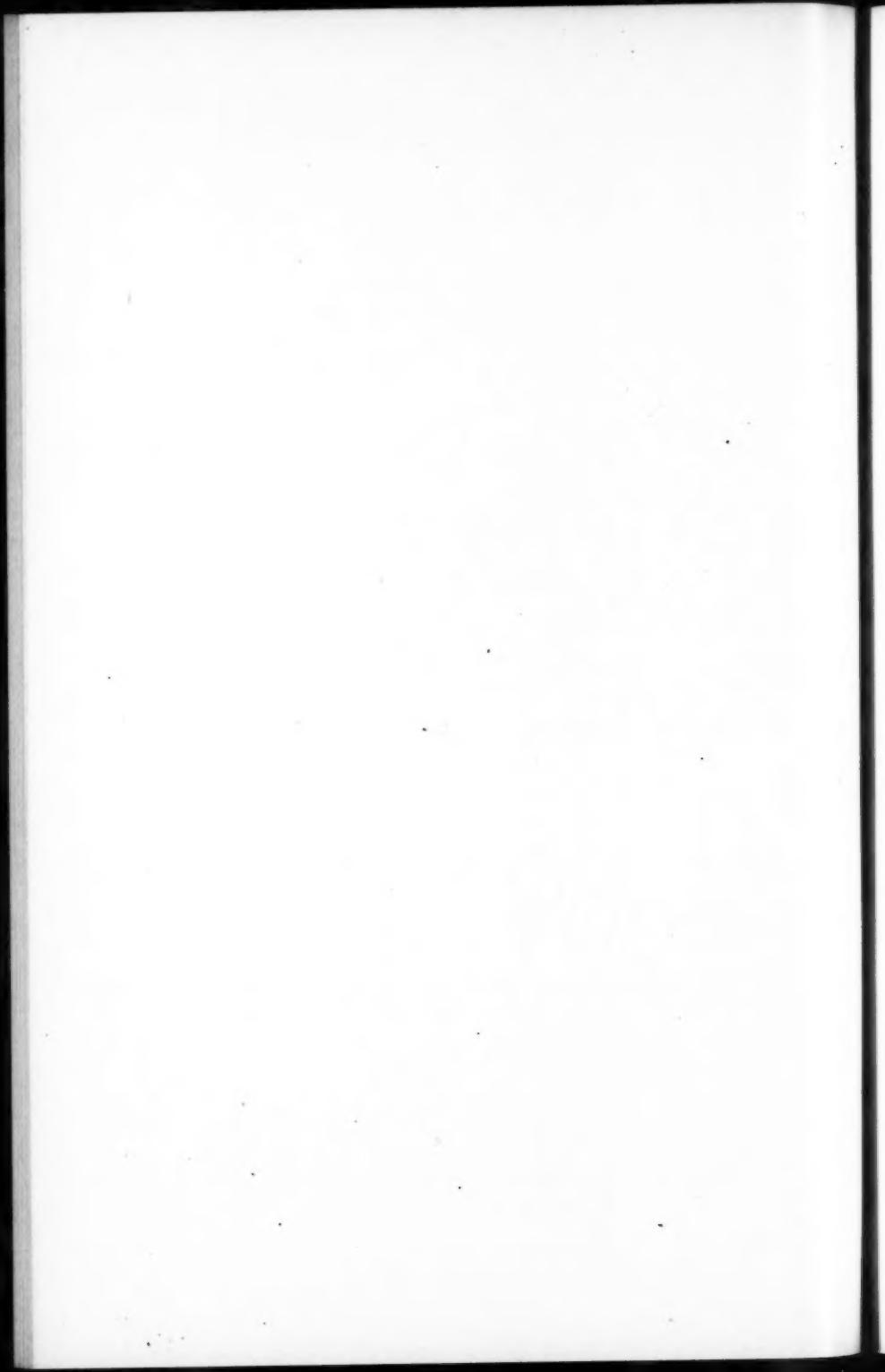
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NOTICE

**Contributors of articles to the AMERICAN JOURNAL OF
ARCHAEOLOGY are notified that hereafter the transliter-
ated forms of Greek words and proper names will be used ex-
cepting such as are commonly given in English version.**

The Editor

Archaeological
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THE EAGLE AND THE BASKET ON THE
CHALICE OF ANTIOCH¹

In a monumental work published by the owners of the chalice² Dr. G. A. Eisen has set forth the results of his nine years' study of this masterpiece of early Christian art. He concludes that the silver holder is a work of the first century of our era, that the twelve seemingly portrait figures are authentic portraits, two of Christ and ten of as many early Christian leaders, and that the interior cup is probably the actual cup used at the Last Supper.

Conclusions so sensational will, unfortunately, arouse both for and against them prejudices which should have no place in a discussion of facts. Furthermore, since the chalice is obviously loaded with symbols, archaeologists who accept the principle that Christian symbolism originated not long before the year 100 and developed rather slowly throughout the next two centuries, cannot consistently assign it a date much earlier than the fourth century, and some would prefer to put it later.

Yet I think that few persons who have seen the chalice itself will feel disposed to ridicule Dr. Eisen's conclusions, however unable they may be to accept them. No photographs or other reproductions convey an adequate idea of the impression which these extraordinary figures make upon virtually all who see them, and any one at all familiar with the pagan and the Christian art of the first four centuries will at once appreciate the difficulty of assigning them to a late date in that period, and of regarding them as nothing more

¹ A paper read before the American Philosophical Society, Nov. 7, 1924, and in public before the Biblical and Oriental Fund of the American Schools of Oriental Research, Union Theological Seminary, New York, Dec. 29, 1924.

² *The Great Chalice of Antioch*, Kouchakji Frères, Paris and New York, 1923. Vol. I, Text, by G. A. Eisen; Vol. II, Plates. See also Dr. Eisen's earlier articles in *A.J.A.*, xx (1916), 426-37, xxi (1917), 77-79, 169-86; and in *The New Era Magazine*, Jan., June, July, 1920. James A. Montgomery, *A Note on the Great Chalice of Antioch*, in *A.J.A.*, xxi (1917), 80 f.; Louis Bréhier, *Les Trésors d'argenterie Syrienne et l'école artistique d'Antioche* in *Gazette des Beaux Arts*, 1920, t. 1, 173-96; Charles Diehl, *L'École artistique d'Antioche in Syria*, II (1921), 84-5, Pl. IX; Arthur Bernard Cook, *The Chalice of Antioch* in *The Cambridge Review*, XLV, No. 1111 (Feb. 15, 1924), 213-16; also in *The Illustrated London News*, Aug. 1924, and in the Appendix to *Zeus*, Vol. II; F. J. Foakes-Jackson in *The Churchman*, Feb. 2 and 9, Aug. 16 and 23, 1924; anon. review in *The London Times Literary Supplement*, June 5, 1924; Strzygowsky, review in *Jahrb. d. asiatischen Kunst*, 1924, 53-61; Sir Martin Conway in *The Burlington Magazine*, XLV, No. 258 (Sept. 1924); J. P. Kirsch in *Römische Quartalschrift*, XXX (1916-22), 106-7, who refers to Volbach in *Germania, Korrespondenzblatt d. Röm.-Germ. Kommission d. Archäol. Inst.* 1918, 23-5. W. B. McDaniel, *The Great Chalice of Antioch* in *Classical Weekly*, Vol. 18 (1925), pp. 123-127.

It gives me pleasure to acknowledge the courtesy of Prof. C. R. Morey in permitting me to consult the *Index of Christian Art* now in course of preparation under his direction by the Department of Art and Archaeology of Princeton University, a gigantic work which is already of great value and which when completed will be indispensable to all students of the subject.

than the products of an idealizing imagination. The problem which they present is, indeed, the chief problem of the chalice.

I have long doubted, on independent grounds, the supposed late origin of Christian symbolism. The only positive evidence is that of the Roman catacombs, in which symbols make their appearance in the course of the second century. But it is obvious that the first appearance of a symbol in funerary art is not trustworthy evidence for the date of its invention, just as the appearance of a new word in an inscription does not warrant the inference that it was coined by the author of the inscription. Symbols are but visible equivalents for words, and, as in the case of words, the fact that they are used at all proves that they have a long history behind them during which they were gradually winning general acceptance. Funerary customs, in particular, are notoriously tenacious of tradition, and the relative frequency of the various symbols employed in the catacombs must reflect in no small degree the "conservative" and the "liberal" inclinations of individual members of the Christian community as regards the decoration of their family tombs; it certainly cannot be taken as direct evidence of the extent to which Christians in general would have understood their meaning.

Positive, direct evidence for the seventy years preceding the earliest catacomb burials is lacking, but the indirect evidence is ample, and it all points towards the same conclusion. No one can turn the pages of such a book as Mr. A. B. Cook's *Zeus*—to mention one out of many—without realizing that the Hellenistic peoples from whom the first Gentile converts to Christianity were drawn expressed their ideas in symbols, not merely occasionally, but habitually; one may, indeed, speak of their "language of symbols" as appropriately as of their "language of words." There is no reason for assuming that their conversion to Christianity would have affected their inclination towards this mode of expression. So also of the evidence from literature. The earliest Christian literature abounds in metaphor and symbol, and some of the early books, such as the *Apocalypse of John*, the *Shepherd of Hermas*, and the *Testament of Hezekiah*, convey their messages in symbols so artificial and elaborate that they are in large part unintelligible to the modern reader in the absence of an explanation. The assumption that for three generations, nearly one hundred years, Christians abstained from giving their ideas those concrete modes of expression which had been habitual with them before their conversion and were universal among their contemporaries, is so improbable that nothing but direct and conclusive evidence could make it credible. Of such evidence none is forthcoming.

I do not, therefore, regard Dr. Eisen's conclusions as *a priori*

inadmissible. Furthermore, so far as I am able to form an opinion, not being an archaeologist by profession, I think the evidence now in hand distinctly in favor of a first century date for the holder. In the present paper, however, I am not concerned with this issue but with a minor problem, one which lies in a field with which I am more familiar, the philosophical and religious ideas of the Hellenistic age.

The general framework of the chalice design (Fig. 1) is a vineyard springing from six pairs of stems; the branches, leaves and bunches of grapes are so disposed as to form twelve medallion-like spaces



FIGURE 1. THE CHALICE OF ANTIOCH (COURTESY OF KOUCHAKJI FRÈRES)

in which are placed twelve seated figures. Two, on opposite sides of the holder, represent Christ, one as a younger and one as an older man. These are, respectively, the central figures of two well defined groups, each composed of five figures, surrounding and facing the figure of Christ and coöordinated to it by extending toward it the right arms in the gesture of *adoratio*. The younger Christ uplifts the right hand in a gesture of benediction; in the left is an open scroll, symbol of the "New Law." The left hand of the elder figure has been destroyed, that which is seen in Figure 1 being a restoration by André. The right is outstretched towards a plate on which are seven loaves, two fishes, and one or two smaller objects of uncertain character. To the right of the chair is a lamb with its hindquarters towards the chair but turning its head backward and upward in a wistful attitude towards Christ. Beneath the pedestal of the

chair is a large basket full of loaves, flanked by two bunches of grapes; upon the loaves is perched an eagle with wings uplifted as if on the point of taking flight.

The eucharistic basket closely resembles the type which first appears in the catacomb paintings of the early second century, but the conjunction of the eagle and the basket is, so far as I have been able to ascertain, unique in Christian art, and its interpretation is by no means obvious. The eagle, indeed, occurs but rarely upon Christian monuments, and some good authorities (e.g. J. P. Kirsch in Cabrol's *Dictionnaire d'Archéologie Chrétienne et de Liturgie* s.v. *Aigle*, I, 1037-8) hold that it is never used as a symbol but as a decorative element only. In Christian literature also the eagle is not a symbol possessing any fixed and generally recognized value; it is taken as a symbol, usually, only in commentaries on passages of scripture in which it is mentioned, and its signification then varies with the context. For example, it is interpreted as representing the rapacious man,¹ the Christian Church,² the devil,³ the human soul,⁴ and Christ.⁵

The eagle of the chalice is discussed by Dr. Eisen, Vol. I, pp. 25-6, and his conclusions are briefly stated on p. 127 as follows:

The first one to suggest the symbolism of the eagle was Walter Lowrie, author of "Monuments of the Early Church." The eagle according to him can, in the instance of the Chalice, only represent the Roman Empire. This symbolism had already been in use since the time of Herod as recorded by Josephus. Herod placed a golden eagle on the top of the temple in order to symbolize the power of Rome, which was above all.⁶ The Chalice theme is that the Roman Empire partakes of the benefits of Christianity as administrated by Peter and Paul, the two nearest Apostles.

Although this interpretation is not impossible, another, which was first suggested to me by a series of monuments collected and studied and in part first published by Cumont,⁷ seems to me preferable. Cumont enumerates 24 tomb-reliefs of the same type and illustrates 14 of them, of which four examples will be found in Figures 2, 3, and 4. Among the illustrations are 12 eagles and 6 baskets. Four of the baskets occur with the eagle, two without it. Nearly all come from the region of Membidj, the ancient Hierapolis, or

¹ *Epistle of Barnabas*, X, 4.

² Methodius, *Conviuum decem virginum* in Combefis, *Graecorum Patrum Auctuarium* 1672, Pars I, p. 115C.

³ Origen, *In Ezechiem Hom.* XII, Migne, Opera, Vol. III, col. 752-7.

⁴ Origen, *Selecta in Psalmos*, Migne, Opera, Vol. II, col. 1560.

Maximus of Turin, *Hom. LIX*, Migne, 57, col. 366.

Ambrose, *De Mysteriis*, c. VIII, Migne, 16, col. 420.

Augustine, *Enarratio in Psalmos*, Migne, Opera, Vol. IV, col. 1323-4.

Physiologus Leidensis, c. XXIV in Land, *Anecdota Synonica*, Vol. IV.

⁵ Augustine, *Annotationes in Job*. Migne, Opera, Vol. III, col. 884.

⁶ The account of the eagle erected by Herod over the great gate of the Temple will be found in Josephus *Antiq. Jud.* XVII, 6, 2; *Bell. Jud.* I, 33, 2.

⁷ *L'aigle funéraire des Syriens*, in *Rev. de l'hist. d. rel.*, T. 62 (1910), pp. 119-63; reissued, somewhat revised and enlarged, in his *Études Syriennes*, Paris, 1917, pp. 35-118. References are to this second publication.

from that of Bâlkîs (Zeugma) on the Euphrates, which towns are about one hundred miles to the eastward of Antioch and about 20 miles apart.

Cumont does not express any opinion as to the dates of these monuments, beyond attributing them to the age of the Empire. But, in this context, precise dates would not be of especial significance. The reliefs express ideas which can be traced for nearly a thousand years in Greek and Roman philosophy and religion and which were widely accepted, not only in Antioch and its vicinity, but throughout the Empire during the first four centuries of our era.



FIGURE 2. FUNERARY RELIEFS FROM BÂLKÎS (ZEUGMA), NORTH SYRIA.
(REPRODUCED FROM CUMONT *Études Syriennes*, PARIS, PICARD, 1917, p. 46)

The superficial resemblance between the group on the chalice and the figures of the tomb-reliefs is striking. Is it nothing more than a superficial resemblance?

On *a priori* grounds one would presume that it probably is more. In the first place, eagles have no natural affinity to baskets; their association on the reliefs and their conjunction on the chalice point to congruence between the ideas which they symbolize as the ground of the connection. In the second, since the ideas expressed by the reliefs must have been familiar to virtually the entire pagan and Christian population of north Syria throughout the period to which the chalice can be attributed, the eagle and the basket must have been speaking images to all, and it is not likely that a Christian artist would have used such familiar pagan symbols to convey ideas radically different from those which were already attached to them.

What, then, was their meaning to the pagan? The monuments themselves make it evident that both eagle and basket symbolize the soul of the deceased. For example, on the family monument

shown in Figure 3, beneath two eagles standing side by side is the legend, "Phalados, Zoöras, brothers." Adjacent is the bust of a woman, inscribed, "Soualaia, their nurse," and, next to it, a basket which is declared to be "Zebinnou, their sister." Thus



FIGURE 3. FAMILY TOMB, BALKIS (CUMONT, *op. cit.* p. 42)

the eagle, the portrait and the basket all represent the soul of the deceased, seemingly indifferently. In Figure 4 the upper register exhibits portraits of a man and a woman, the lower, a basket and an eagle. Here the portraits perhaps symbolize the earthly body buried within, but the basket

and the eagle certainly represent the souls, now ascended to heaven.

The ideas which associate the eagle with both the sun and the soul are admirably analyzed and explained by Professor Cumont in the monograph to which I have above referred, but the connection between the basket and the soul he does not attempt to explain, merely suggesting that it may have been derived from the "mystic cist" which figures in many oriental Mysteries, or may have been a moon-symbol, as the eagle had been a sun-symbol.¹

The significance of the basket, however, as well as that of the eagle, can be explained by reference to the ideas of that "solar theology" which was introduced into Rome from Syria in the first century before Christ, which later became the official re-

¹ P. 49: "Il ne faut pas voir dans celle-ci la corbeille à laine qu'on rencontre fréquemment sur les stèles funéraires avec la quenouille, le peigne, le miroir, etc. Si ce panier était un objet domestique, que signifierait la couronne qui le surmonte? Voudrait-on aussi considérer l'aigle qui l'accompagne, comme un oiseau apprivoisé, avec lequel le défunt se distraisait durant sa vie? La corbeille doit avoir ici une autre signification. Nous serons plutôt tentés d'y reconnaître la ciste mystique si souvent reproduite par l'art antique, et qui était un élément essentiel des cérémonies secrètes dans plusieurs cultes orientaux. Mais nous n'entreprendrons pas d'élucider cette question accessoire." Professor Cumont adds in a footnote: "On serait tenté de croire que la corbeille sacrée, qui appartient à plusieurs déesses, comme Déméter, Hélène, . . . est ici l'emblème de la divinité lunaire, comme l'aigle l'est du soleil."

Proof-correction affords me the opportunity of calling attention to two important contributions to the study of the eagle and basket symbols which ap-



FIGURE 4. STELÉ, MARASH (CUMONT, *op. cit.* p. 48)

ligion of the Empire, and which has been so exhaustively studied by Professor Cumont in a series of well-known books.¹

Originally, no doubt, a primitive sun-worship, the cult in time came to include the vivifying rays of heat and light which proceed from the sun, and the ideas associated with it were ultimately introduced into philosophy, becoming the basis of a crude pantheism. The common substance of which the world is made is conceived as at once mind and matter. As Mind, it is Thought and God; as Matter, it was imagined as a hot, luminous, gaseous substance with some of the properties of superheated steam, and was variously designated, sometimes as "Fire," sometimes as "Aether," sometimes as "Pneuma," "Breath" or "Wind," sometimes as "Light." The word "aether" *aἰθήρ* properly signifies the brightly illuminated upper region of the atmosphere, above the level of cloud and mist, and is usually distinguished from the heavy, murky *ἀήρ* of the lower regions. Hence it is frequently, especially in poetry, used as almost interchangeable with "fire" and "light," less frequently (but often by Empedocles) as equivalent to "air."

In the philosophical schools these vague conceptions assumed various but more definite forms, of which I need mention that one, only which is relevant to the present problem. Earth, water, air, aether, fire, and light were regarded as diverse manifestations of one and the same underlying substance, not identical with any one of them but usually termed "fire," or, *πνεῦμα*, in Latin *spiritus*, from which is derived the modern conception of "spirit." Earth changes into water, water into air, air into aether, aether into fire. Thus, while any one of the other elements may serve as fuel for fire, aether, as being the only element which changes directly into fire, is alone its proper fuel. But with these physical or "scientific" conceptions the earlier, animistic ideas remained inextricably intertwined. All the elements are conscious to some degree, but aether, fire, and light possess intelligence of a higher order than that of the lower elements, and the larger the mass of any one of these elements the greater and more powerful the mind associated with it. The sun, the stars, and the great mass of aether which surrounds the earth are gods of high degree. The human soul, which is a tiny spark of

peared, some time after my article had been sent in to the *A. J. A.*, in the *Annual of the American Schools of Oriental Research*, Vol. V, 1925, namely *Eagle and Basket on the Antioch Chalice*, by Prof. B. W. Bacon and *Cuneiform Parallels to Solomon's Provisioning System* by Prof. R. P. Dougherty.

¹ *Les Religions Orientales dans le Paganisme Romain*, Paris, 1907.

English translation: *Oriental Religions in Roman Paganism*, Chicago, 1911.

La Théologie Solaire du Paganisme Romain, in *Mém. Acad. d. Inscr.* Tom. XII, 2me Partie, 1909.

Le Mysticisme Astrale dans l'Antiquité, in *Bull. de l'Acad. royale de Belgique*, Classe d. lettr. No. 5, Bruxelles, 1909.

Astrology and Religion among the Greeks and Romans, New York, 1912.

The After Life in Roman Paganism, Yale Univ. Press, 1922.

fire or portion of aether, possesses a much lower intelligence and is inferior in power. As fires, the sun and the stars consume the aether surrounding them, but as gods they feed upon it, it is their celestial food. So also the soul, when emancipated from the body by death, ascends to the upper regions and there, like its kinsfolk the gods, finds its sustenance and nourishment in the aether.¹

The association between the eagle on the one hand and the sun and the soul on the other has been traced by Professor Cumont back to Babylonian times, and was undoubtedly established by the



FIGURE 5. ROMAN LAMP IN POSSESSION
OF W. R. N.

The bust on the eagle's back should indicate a person deceased, but the thunderbolt clutched by the eagle is an attribute of Zeus, and it

¹ The sources will be found assembled in Cumont's works; two passages must here suffice:

Cicero, *Tusc. Disp.* I, 19 (ed. T. W. Dougan, Cambridge, 1905): *qui* (i.e. *animus*) *si permanet incorruptus sive similis, necesse est ita feratur, ut penetret et diuidat omne caelum hoc, in quo nubes, imbre uentique coguntur, quod et umidum et caliginosum est propter exhalationes terrae. quam regionem cum superauit animus naturamque sui similem contigil et adgnouit, iunctis ex anima tenui et ex ardore solis temperato ignibus insistit et finem oltius se esferendi facit. cum enim sui similem et levitatem et calorem est adeplus, tamquam paribus examinatus ponderibus nullam in partem mouetur, eaque ei demum naturalis est sedes, cum ad sui simile penetrauit: in quo nulla re egena aletur et sustentabitur isdem rebus, quibus astra sustentantur et aluntur.*

Lucan, *Phars.* IX, 6 (quoted by Dougan on this passage):

*Quodque patet terras inter lunaeque meatus
Semidei manes habitant, quos ignea uirtus
Innocuo uitiae patientes aetheris imi-
Fecit.*

² "Hermes" Λόγος Ἰσθός πρὸς Ὑπερ [Stob. Ecl. p. 1074 H]: The eagle, when released from a cage [τραχήσαι] . . . εἰς τὸν αἰθέρα ἔρων καὶ φύσιν ἔχει διαιτᾶσθαι.

may be, as the Editor suggests to me, that the scene depicted is the rape of Ganymede, a theme often introduced on funerary monuments as symbolic of the soul's ascent to heaven. This belief was popularized by the custom which was observed at the cremation of every Roman Emperor from Augustus onward of releasing a living eagle from the pyre when it was lighted in order that the people might see the soul of the Emperor actually ascending to heaven. No doubt opinions differed among the populace whether the eagle was the bearer of the soul, or was the soul itself. Lucian relates with malicious satisfaction (*de morte Peregrini*, c. 39–40) how, after the fanatic Peregrinus had cast himself into the fire, Lucian himself set afloat among the excited crowds the story that a vulture had been seen to rise from the flames and ascend to heaven, crying with a human voice, "I have left the earth and am going to Olympus." But in a late epigram addressed to the eagle on Plato's tomb (Cumont, pp. 88–9) the meaning is more ambiguous:

"Why, why, O Eagle art thou perched upon a tomb?
Tell me, what god's starry dwelling is the object of thy gaze?"
"Plato's soul I image, to Olympus flown away,
Though his earth-born body Athenian earth retains."¹

Since the basket represents the soul on the Syrian reliefs quite as well as does the eagle, there is no more reason for supposing that the makers of those reliefs believed that the soul actually took the form of an eagle after death than for supposing they believed it took the form of a basket; the eagle is a symbol of the soul and no more.

A clew to the meaning of the basket-symbol is supplied by a passage in Macrobius. In course of his description of the shrine of the sun-god at Hierapolis he says:

The natives of Hierapolis, Assyrians by race, comprise all the powers and virtues of the sun under the form of a single bearded image, which they call Apollo. His face is represented as having a pointed beard; and a basket projects above his head. . . . The eagles beside him look as if they were flying. . . . The beard below his chin signifies that rays are shot downwards on to the earth. The golden basket rising aloft indicates the apex of the upper air, from which the sun is supposed to derive its substance.²

¹ Αἰεὶ τίττε βέηκας ὑπὲρ τάφον; η τίνος, εἰπέ,
ἀστερέωτα θεών οίκον ἀποσκοτεῖς;
Ψυχῆς εἰμι Πλάτωνος ἀποταμένης ἐς Ὀλυμπον
εἰσῶν. σῶμα δὲ γῆ γηγενές Ἄρδις ἔχει.

² Macrob. Sat. I, 66–8 (Eyssenhardt, p. 103, 4): *Hieropolitanus praeterea, qui sunt gentis Assyriorum, omnes solis effectus atque virtutes ad unius simulacri barbati speciem redigunt eumque Apollinem appellant. huius facies prolixa in acutum barbe figurata est eminentia super caput calatho . . . aquilae propter exprimit instar uolatus . . . radios in terram superne iaci barba demissa significat. calathus aureus surgens in altum monstrat aetheris summam, unde solis creditur esse substantia.* The above translation is taken from Mr. Arthur Bernard Cook's *Zeus, A Study in Ancient Religion*, Vol. I (Cambridge, Eng. 1914), p. 585. To him also I am indebted for this important reference. Mr. Cook gives on p. 586 a figure (No. 448) of a coin of Hierapolis struck about two centuries before Macrobius' time, on which are depicted two seated deities with baskets on their heads of the same type as those seen on the Syrian reliefs, while beneath their feet is an eagle with uplifted wings.

The basket carried on the head of the sun-god (and it should be remembered that such large baskets, devoid of handles, were usually carried on the head) is, then, a basket of his heavenly food, the aether.

The conception may be defined more precisely with the aid of another interpretation given by Macrobius of the same symbol. Speaking of the worship of Sarapis at Alexandria he says:

"Adjacent to the land of Egypt the city which boasts Alexander of Macedon as its founder reveres Sarapis and Isis with a worship falling little short of awestruck veneration. Under that name, it is to the sun that this veneration is paid, as the city itself bears witness by placing on his head a basket, and also by," etc.

"The crown of his head, adorned with a basket, indicates the lofty height of that star, and also signifies his containing power, for all earthly things return to him, being snatched up by the heat which he sends down."¹

The basket is, then, essentially to Macrobius' mind a *container*. In the first case it is the container of the sun-god's celestial food, the aether; in the second it signifies the sun's function of swallowing up and containing within itself the vapors arising from the earth, all of which become aether before they are absorbed into the sun. The first is an animistic, the second a physical conception.

If the conception of "container" be applied to the baskets on the tomb-reliefs a plausible interpretation of their meaning, taken as symbols of the soul, at once becomes apparent. For the aether is not only the food of the soul, it is also the substance of the soul, as it is, according to Macrobius, the substance of the sun-god; the soul is nothing more than a tiny portion of aether enclosed in a material body, and the artist who wished to symbolize the soul as released from the material body and yet as still retaining its individuality could scarcely have found a more appropriate symbol than the familiar basket of aether. And this, I take it, is the reason why the baskets on the tomb-reliefs are invariably *empty*; they are not really empty, but their very emptiness portrays the presence of the invisible aether.

With these ideas in mind it is not difficult to interpret the group of symbols, which is, so far as I know, unique, shown in Figures 6 and 7,² and taken from a rectangular marble cist for the reception of the

¹ *Sat. I, xx, 13-16* Eysenhardt: *Eidem Aegypto adiacens ciuitas, quae conditorem Alexandrum Macedonem gloriatur, Sarapin atque Isin cultu paene adtonitae ueneratio obseruat. omnem tamen illam uenerationem soli se sub illius nomine testulari impendere uel dum calathum capiti eius infigunt uel dum . . . Ciuius uerx insignitus calatho et altitudinem sideris monstrat et potentiam capacitatis ostendit quia in eum omnia terrena redeunt dum immisso calore rapiuntur.*

² The right to publish this interesting monument was given by the present owner, Mr. Welles Bosworth of New York, to Dr. Eisen, who, in turn, transferred it, with Mr. Bosworth's consent, to me, an act of broad-minded generosity which calls for special recognition, inasmuch as Dr. Eisen knew that I intended to use it in an attempt to establish an interpretation of the eagle and basket which he does not himself accept. Mr. Fahim Kouchakji, from whom Mr. Bosworth acquired the cist, tells me that it came from the collection of the Roman dealer Sangiorgio. Presumably it was found in Rome, and should probably be dated in the first century after Christ, since the combination of the heads of Jupiter Ammon at the upper corners with eagles at the lower was a design fashionable in Rome during the period from Tiberius to Domitian (Altmann, *Die Römische Grabaltäre der Kaiserzeit*, 1905, p. 88).

ashes of the deceased. It measures in width 0.245 m., height 0.17 m., depth 0.20 m. The front (Fig. 6) displays a framed tablet from which the inscription has been erased; on either side the upper corners are adorned with the horned but human heads of Jupiter Ammon, a well-known sun-divinity, beneath which, at the lower corners, are two corresponding eagles with wings uplifted and with their heads turned toward the tablet. Suspended by ribbons from the horns of the Ammon heads is a heavy garland, and beneath it on either side are two birds (doves?), much defaced but still recogniz-



FIGURE 6. MARBLE CIST (COURTESY OF MR. WELLES BOSWORTH OF NEW YORK)

able; above the garland a female figure reclines upon a couch with a pillow beneath the head. The triangular pediment of the cover bears in the tympanum a rosette; that it is here a symbol of the sun is put beyond question by the stars which flank it on either side. The cover represents a palm-leaf (?) mat rolled up at either side; the ends of the rolls are finished in rosettes.

All these symbols are of frequent occurrence on similar monuments of the first century found in Rome and are readily interpreted into the language of the solar religion. The Ammon heads are symbols of the sun (Cook, *Zeus*; I, p. 348 *sqq.*). The eagles may also represent the sun, but their juxtaposition with the doves makes it more probable that they, like the latter, are soul symbols. The garland probably suggests the happy state of the deceased just as the sun and stars above his name betoken his heavenly dwelling-place. The nude figure beneath the inscription-tablet, as are probably all

symbols in similar position, is a graphic representation of the soul whose name is recorded above. Here the soul itself is portrayed, divested of its mortal raiment. Elsewhere it is often represented by an eagle (Altmann, *op. cit.* figs. 1, 40, 42, 62, 64, *et al.*), or as a winged sun-disk. With this last symbol one may compare Plutarch's approximately contemporary description of the ascent of the spirit:

But those that have reached the heights and have attained a position of security, first, like the victors in the games, roam about wearing garlands of feathers, termed "of stability," because during life they had rendered the soul's irrational and passible element gentle and amenable to reason and adorned therewith. Second, with faces like sunbeams and forms like fire they are borne upward by the aether about the moon, as here below by the air, and acquire from it temper and strength as do tempered tools from the water-bath. For whatsoever thinness and turbidity still remain in them are improved and they become firm and transparent, so that they are nourished by the exhalation which they encounter.¹

On other monuments the soul is represented by doves (Altmann, *op. cit.* figs. 27, 60), by the bust or portrait of the deceased (figs. 45, 57, 62, *et al.*), by the inscription alone (figs. 54–59). The nude figure seems to be a rare symbol of the soul; Altmann gives but one representation of it (fig. 79), although he describes another (No. 61).

On each side of the cist is depicted a large and obviously empty basket (fig. 7). The two baskets differ slightly in size but in other respects the designs of the two sides are identical. A fillet is thrown across the top in such manner that its ends hang down almost to the ground while the middle part sinks into and is concealed by the basket. Two objects resembling palm branches or feather wands project from the basket near the fillet; between them is a pine-cone, such as usually forms the tip of the thyrsus carried in Bacchic processions. Here also it should probably be conceived as supported by the shaft concealed within the basket. To the (observer's) right of the cone is an object which might be taken as a large leaf or feather. Around the middle of the basket is a band resembling in structure the fillet, but narrower.

The pine-cone occurs on funerary monuments (cf. Altmann,

¹ Plut. *De facie in orbe lunae*, c. 28 (943E). The text is corrupt. I print Dübner's text with the emendations I have adopted: αἱ δὲ ἄνω γενόμενα καὶ βεβαιῶς ιδύντεσσι, πρῶτον μὲν, ὥσπερ οἱ νικηφόροι, περιτασσοῦσι τοῖς εὐθαταῖς λεγομένοις, διτὶ τῆς ψυχῆς τὸ ἀλογον καὶ τὸ παθητικὸν εὐήνιον ἐπιεικάς τῷ λόγῳ καὶ κεκομημένους ἐν τῷ βίῳ παρέσχοντο. δεύτερον, ἀντίν (Ι.-αι) τὴν δύνην δικιαῖα πυρὶ δὲ τὴν ψυχὴν (Ι. φυὴν), ἀντα κονιφοῦσιντο (Ι.-διεναι) ὥσπερ ἑταῖρα <τῷ ἀρέι οὐτας ἔκει> τῷ περὶ τὴν σελήνην αἰθέρι, καὶ τὸν ἄφ' αὐτοῦ (Ι. ἀπ' αὐτοῦ) καὶ δύναμιν, οἷον τὰ στομούμενα βασθῆ (Ι. βασθῆ) λογχούσι. τὸ γάρ ἄρασθ ἔτι καὶ διακεχυτὸν βόννυται, καὶ γίνεται σταθερὸν καὶ διανύει, ὥστε ὑπὸ τῆς τυχούσης ἀναθυμάσεως τρέπεσθαι.

The feather garlands are probably cult objects, since they are designated by a technical term; no doubt they symbolize the wing of the soul by which she flies upwards. "Lucian" states (*De Dea Syria*, 55) that every worshipper at Hierapolis, upon first entering the city, offers a sheep with special rites, shaves his head and puts on a garland or fillet. But how could feathers come to be symbols of "stability"? Possibly Plutarch's informant has mistranslated the Syriac word *geyama*, which means "standing up," "rising up," hence "stability," and, in Christian Syriac, "resurrection."

op. cit. p. 28 and figs. 90, 91). According to Suidas, it was supposed to represent the heart of Dionysus from which the second Dionysus was born. It is then, probably, a symbol of life and immortality.¹

In the Syrian monuments studied by Cumont the symbol of the soul, the eagle or the basket, is sometimes surmounted by a fillet, as in those shown in Figure 2, which he interprets as a symbol of victory. The structure of these fillets cannot be clearly made out. In the fillets on the cist, the middle portion, of which only the extremities can be seen, seems to be a kind of roll. From it two ribs descend, and to the ribs are attached ill-defined elements the soft, irregular contours of which strikingly resemble those of feathers. In fact, they resemble feathers much more than do the feathers on the bodies of the two adjacent eagles. At the ends of the fillets are objects corresponding to tassels but composed of elements flat, narrow, sharp-edged and trimmed at the extremities to a straight line. They look like stiff tail or wing feathers.

The two objects projecting above the basket on either side of the pinecone resemble the fillet in structure; if composed of feathers they must be feather wands and the single object between the cone and the "wand" must be a large feather, presumably an ostrich feather.

I think it not unlikely that the fillet is the "garland of feathers" described by Plutarch, worn in the sun-ritual on earth as a magic means of imparting to the soul the power of soaring on high after death and therefore still worn by the soul that has now attained the height of heaven, and that the wand and the ostrich feather are also cult-objects of similar import. The band around the basket might then represent a feather girdle. But one may also take the "wands"



FIGURE 7. SIDE OF THE CIST SHOWN IN FIGURE 6

¹ Lobeck, *Aglaophamus*, I, p. 560, n.: *Hinc enim tracta videtur conjectura quem Suidas affert, de conis thyrsorum.* Κωνοφόρος. Κάνος ὁ βατροειδῆς τοῦ σπροβίλου καρδίας, δὲ ἔφερον αἱ γυναικεῖ βαστάζουσι ἐν ταῖς τοῦ Διονύσου τελεταῖς, ἐπειδὴ δύοις τὸ σχῆμα τοῦ κάνου τῇ τοῦ ἀνθρώπου καρδίᾳ, ἐκπατάγη δέ φασι οἱ Ἑλληνες τῆς καρδίας τὸν Διόνυσον. οἰκεῖος οὖν τοι τοῦ μωσηρίῳ τούτῳ ἐποιούσι. *Cornutus de Cybele*, VI, 146. καρδίαν ἀνατιθέασιν αὐτῇ, διτὶ αἵτια ζωγραφίας αὐτῇ ἐγένετο.

as palm-branches and regard the other objects as composed of leaves.¹

I do not know of any direct connection between the pine-cone and the Syrian cult. It may have been taken over by the latter from the kindred cult of the Great Mother.

A curious dream reported by Artemidorus probably should be referred to the same circle of ideas:

A certain man dreamed that he was put by Sarapis into the basket which is on his head. The man died. For the god (Sarapis) is taken to be Pluto.²

Since Artemidorus says that he collected these dreams in Greece, Italy, and the province of Asia (preface to Bk. V), the dream itself may be taken as authentic, but one may doubt whether Artemidorus' interpretation is that which the dreamer would have put upon it, or that it has any relation to the association of ideas which originally suggested the dream. Many Greeks regarded Sarapis as a chthonian deity (Cook, *Zeus*, I, p. 188), but, as Macrobius proves, this was not the universal interpretation, and the evidence above given shows that in Syria, at least, a dream of being put into the basket on the sun-god's head would have been equivalent to a modern dream of being put into a coffin. Artemidorus, who is trying to rationalize oneiromancy as Ptolemy had rationalized astrology, may well have known of this popular belief and may have set it aside as a mere superstition.

The basket was probably originally the familiar food-basket, filled with aether as the food of the soul, and later taken as representing that portion of aether which is the soul itself. But, possibly, on the principle of sympathetic magic, the pictured basket may also

¹ Possibly connected with Plutarch's "garland of feathers" and with the Hierapolis cult is a Syrian tomb-relief published by Pognon, *Inscriptions Sémitiques* (Paris, 1907-8), *Inscription Syriaque dans une Grotte Funéraire*, Pl. XI, showing a figure wearing a headdress composed of large upstanding feathers, like that of an American Indian, and somewhat resembling one on a British Museum coin of Ptolemais-Ace (G. F. Hill, *Catalogue of the Greek Coins of Phoenicia*, 1910, Pl. XLII and p. lxxxv). Pognon also prints from a MS in his possession of Theodore bar Kon's *Liber Scholiorum* the story of Tammuz and Balthi (i.e. Adonis and Venus; see Addai Scher's edition of Theodore in *Corpus Script. Chr. Orientalium: Scriptores Syri, Textus*, Ser. II, Tom. LXV, pp. 312-13), and recognizes that it must be drawn from some early Christian "Apology," but does not observe that his shrewd conjecture is fully confirmed by the version of the story given in the *Oration of Melito* (Cureton, *Spicilegium Syriacum*, p. 25 of text). Comparison of Theodore's version of this story and of his versions of the stories of "Zaradusht" (*ibid.* Tom. LXVI, p. 295, 17), of "Nebo" of Mabug, i.e. Hierapolis, and of "Baal and Ashtoreth" (*ibid.* Tom. LXV, p. 369, 11 and p. 204, 22) with the corresponding stories in "Melito" makes it quite certain that both authors are drawing from a common source. Since that source contained local legends (although they are rewritten from the syncretistic point of view prevailing in the Syro-Greek cities and are furnished with a Christian explanation), and cannot, I think, be dated much later than A.D. 200, it is worthy of more attention than it has yet received from students of the Syrian Goddess of Hierapolis.

² Artem. *Oneirocritica*, V, 93 (Paris, 1803, p. 269): Ιδοξε τις ὥπο τοῦ Σαράπιδος εἰς τὸν κάλαθον τὸν ἐπὶ τὴν κεφαλὴν κείμενον βεβλῆσθαι, ἀπέθανεν. Πλούτων γάρ ὁ θεός εἶναι περόμοσται.

have been the bond which prevented the soul's being dissipated, thus being supposed to perform for the soul the office which the coffin performed for the body. In the philosophical schools the need of such a bond was felt and various theories were advanced as to its nature. The earlier Stoics taught that the soul at birth is chilled by contact with the air and so acquires a "temper" which makes it an individual entity.¹

From the time of Plutarch onward the doctrine that the spirit or divine element possesses a body analogous to that which is now termed the "ethereal" or "astral" body, or that it is wrapped in one or more such envelopes, occurs in many diverse forms. But, according to Iamblichus, in most of these theories this body or envelope is supposed to serve both as a means of protecting the spirit and also as a "vehicle" on which it ascends after death to the upper regions.² Thus in these later theories the ethereal body performs both of the functions originally symbolized separately by the basket and the eagle.

The artist of the chalice has taken these two pagan symbols, the eagle and the basket, and has utilized their pagan significations for the conveyance of a specifically Christian doctrine. The eagle with uplifted wings represents the soul on the point of taking flight for heaven, precisely as it does on the pagan tombs. The basket, which might signify either the soul itself or the soul's celestial food, he has taken in the second sense, and has at once determined the sense in which it is to be understood and given it a specifically Christian meaning by filling it, not with invisible aether, but with eucharistic loaves, and by placing on either side a bunch of grapes. For the Christian derives his spiritual food, not from aether, but from the Eucharist.

Furthermore, consideration of the design raises a strong presumption that the eagle and basket are intended to symbolize some particular doctrine in connection with the Eucharist. The younger figure of Christ, portrayed as proclaiming the new dispensation, probably symbolizes St. Paul's "Christ according to the flesh" (*2 Cor. 5, 16*), while the elder, with the eucharistic symbols at his right hand and the wistful lamb beside him, signifies the risen or heavenly Christ feeding the Church with the spiritual food of the Eucharist. The introduction of another eucharistic symbol, the basket and grapes, in such close conjunction with the preceding,

¹ Plotinus, *Ennead. IV, 7, 11*; von Armim, *Vet. Stoic. Frag. II*, §804; Nemesius, *De Nat. Hom. Matth.* pp. 70-71. Cf. Plut. quoted above, p. 368.

² Iambl. *De Anima* ap. Stob. *Ecl. Phys.* p. 926 Heer.; I, 385, 3 Wachsm. Οἱ μὲν γάρ εἰθισ· αὐτὴν τὴν ψυχὴν αὐτῷ τῷ σώματι τῷ δργανικῷ συνοικίσαντι, ὥσπερ οἱ πλεῖστοι τῶν Πλατωνικῶν· οἱ δὲ μεταὶ τῆς τε ἀσωμάτου ψυχῆς καὶ τῆς ἀγγειλάδοντος [I. ἀγγειλάδοντος, c. I. p. 464, 8 W] αἰθέρια καὶ οὐράνια καὶ πνευματικά περιβλήματα περιαπέχοντα τὴν νοερὰν ἡσθαν μὲν φρουρᾶς ἔνεκεν, ὑπηρετεῖν δὲ αὐτῇ καθάπερ δχῆματα, συμμέτρος δ' αὗται πρὸς τὸ στερεὸν σόμα συμβιβάζειν μέσοις τισὶ κοινοῖς συνδέσμοις αὐτὴν συνάπτοντα.

must then have a more definite meaning than a mere general allusion to the benefits received from the Eucharist.

Its connection with the eagle, a symbol of the immortal soul, sufficiently intimates the meaning which the artist intended to convey. It is well known that many early Christian writers teach that there is a definite, causal connection between the reception of the Eucharist and the attainment of eternal life. It is not merely that the spiritual food received in the Eucharist aids in a general way in living the Christian life and in the attaining of its end, but that the reception of the elements contributes directly and specifically to the attainment by the individual of immortality.

Language suggesting this doctrine will be found in the Gospel of John. For example (6, 51), ἐγώ εἰμι ὁ ἄρτος ὁ ζῶν ὁ ἐκ τοῦ οὐρανοῦ καταβάσ· ἔαν τις φάγῃ ἐκ τούτου τοῦ ἄρτου, ζήσει εἰς τὸν αἰώνα· καὶ ὁ ἄρτος δὲ ὅν ἐγώ δόσω ἡ σάρξ μοι ἐστιν ὑπέρ τῆς τοῦ κέσμου ζωῆς. (54) ὁ τρώγων μον τὴν σάρκα καὶ πίνων μον τὸ αἷμα ἔχει ζωὴν αἰώνιον, κἀγὼ ἀναστήσω αὐτὸν τῇ ἐσχάτῃ ἡμέρᾳ. But in view of such a parallel as (6, 40) τοῦτο γάρ ἐστιν τὸ θελγμα τοῦ πατρὸς μον, ἵνα πᾶς ὁ θεωρῶν τὸν νιὸν καὶ πιστεύων εἰς αὐτὸν ἔχῃ ζωὴν αἰώνιον καὶ ἀναστήσω αὐτὸν ἐγὼ ἐν τῇ ἐσχάτῃ ἡμέρᾳ, and Jesus' explicit repudiation of a literal interpretation, (6, 63) τὸ πνεῦμα ἐστιν τὸ ζωοποιοῦν, ἡ σάρξ οὐκ ὠφελεῖ οὐδέν· τὰ ρήματα ἀ ἐγώ λελάληκα ὑμῖν πνεῦμα ἐστιν καὶ ζωὴ ἐστιν, I do not think that any weight should be placed upon it. Quite unambiguous, however, are the much quoted words of Ignatius, third (or second) bishop of Antioch, who suffered martyrdom at Rome not many years before or after 110: "Breaking one bread, which is the medicine of immortality, an antidote, that ye should not die but live in Jesus Christ for ever."¹

Whether the immortality thus attained involves the resurrection of the material body or not is a question determined by the individual thinker's point of view. Irenaeus (about 185) believes that it does:

For just as bread from the earth upon receiving the invocation of God is no longer bread but Eucharist, consisting of two things, an earthly and a heavenly, so also our bodies upon partaking of the Eucharist are no longer mortal, for they possess the hope of an eternal resurrection.²

Irenaeus' contemporary, Clement of Alexandria, frequently uses language which suggests this doctrine,³ but his well-known habit of

¹ Eph. c. 20: Ἐνα ἄρτον κλῶντες, δὲστιν φάρμακον ἀθανασίας, ἀντίδοτος τοῦ μὴ ἀποθνήν ἀλλὰ ζῆν ἐν Ἱησοῦ Χριστῷ διὰ πατέρος.

² Adv. Haer. IV, 18, 5 Mass.; Vol. II, pp. 205-8 Harvey: ὡς γάρ ἀπὸ γῆς ἄρτος προσλαμβανόμενος τὴν ἐπιλιθησιν τοῦ θεοῦ, οὐκέτι ἄρτος ἐστιν, ἀλλ' εὐχαριστία, ἐκ δύο πραγμάτων συνεστεκεῖ, ἐπιγείον τε καὶ οὐρανὸν· οὗτος καὶ τὰ σώματα ἡμῶν μεταλαμβάνοντα τῆς εὐχαριστίας, μηκέτι εἶναι φαρτό, τὴν ἀπίδια τῆς εἰς αἰώνας ἀναστάσεως ἔχοντα. Compare also V, 2, 1-3 Mass.; Vol. III, 318-324 Harvey.

³ E.g. Paedagogus, I, 6, 47 (p. 128 B; I, p. 118, 6 St.): ὁ ἄρτος εἰς κράμα καταθρύβεις τὸν οἶνον ἀρτάζει, τὸ δὲ οἴνον ἀπολέτει, οἴνος καὶ ἡ σάρξ τοῦ κυρίου, ὁ ἄρτος τῶν οὐρανῶν, ἀναπίνει τὸ αἷμα, τοὺς οὐρανοὺς τῶν ἀνθρώπων εἰς ἀφθαρτοὺς ἀκτέρεφον, ἀπολεῖτων δὲ μόνας ἔκεινας εἰς φθορὰν τὰς σαρκικὰς ἐκτιμαῖς, οἴνος πολλαχών ἀλληγορεῖται ὁ λόγος, καὶ βρώμα καὶ σάρξ καὶ προψή καὶ ἄρτος καὶ αἷμα καὶ γέλα, ἀ πάντα δὲ κύριος εἰς ἀπόλαυσιν ἡμῶν τῶν εἰς αὐτὸν πεπιστευκότων.

using language in an allegorical rather than the apparent literal sense forbids one's interpreting him quite literally.

The *Acts of Judas Thomas* were originally written in Syriac, probably in Antioch in the early years of the third century. While not strictly gnostic, they are deeply tinged with Valentinian ideas, and the numerous changes which have been made in both the Syriac text and the Greek translation by orthodox copyists have so obscured the author's beliefs that it is not possible to pronounce upon them with confidence. It is, however, quite clear that he conceives of a special relation between the Eucharist and immortality, and he probably regards the immortal life as spiritual in character. On one occasion the Apostle begins the prayer of consecration as follows: "Living Bread, the eaters of which die not! Bread, that fillest hungry souls with thy blessing! Thou that art worthy to receive the Gift and to be for the remission of sins, that those who eat thee may not die" (Wright's translation, with typographical changes).¹ The term "medicine of life" (*sam khayye*), which is obviously equivalent to Ignatius' "medicine of immortality," occurs with unmistakable eucharistic reference in one passage of the Syriac text which is not found in the Greek: "Blessed art thou, Beloved Son, who hast made our deadness to live and our wandering to return back again, and hast become to us the medicine of life by thy life-giving body and by the sprinkling of thy living blood."²

The same term occurs in a similar passage in the Greek text: "Tertia, thou hast not yet heard the herald of life, not yet has it fallen on thy ears, not yet hast thou tasted the medicine of life."³

About the middle of the third century this idea is expressed by Cyprian, bishop of Carthage, but I have not found it in other writers of that period.⁴ But in the fourth and early fifth centuries it is of frequent occurrence. Among the Greek writers who teach it are Macarius Magnes, Athanasius, Gregory of Nyssa, Chrysostom, Theodoret and Cyril of Alexandria; among the Latin, Firmicus Maternus, Ambrose, Augustine and Optatus.⁵

¹ W. Wright, *Apocryphal Acts of the Apostles*, (London, 1871, 2 vols., Syriac and English) I, p. 302, 1-4; II, 268: Lipsius & Bonnet, *Acta Apostolorum Apocrypha*, Leipzig, 1891-1903, II, pt. 2, p. 240, 6-10. The Syriac origin of these Acts was first proved by Prof. Burkitt, *J.T.S.*, I, 2 (Jan. 1900), pp. 280-90. In the passage above quoted the Greeks and the Syriac texts are virtually the same.

² Wright, I, p. 281, 18-21; II, p. 248.

³ Lipsius-Bonnet, II, 2, p. 241, 20: Ω Τερτια, οὐδέπω ἡκουσας τοῦ κήρυκος τῆς ζωῆς· οὐδέπου ράισ σαῖς προσέπεσεν ἀκοᾶς· οὐδέπου ἔγεινος τοῦ τῆς ζωῆς φαρμάκου.

⁴ *De Dom. Oral.* 18 (quoted by P. Batiffol, *L'Eucharistie, la Présence réelle et la Transsubstantiation*, 5me ed. Paris, 1913, p. 234): Quando ergo dicit in aeternum vivere si qui ederit de eius pane, ut manfestum est eos vivere qui corpus eius attingunt et eucharistiam iure communicationis accipiunt, ita

⁵ *The Apocriticus of Macarius Magnes*, translated by T. W. Crafer, D.D. (MacMillan, 1919), Ch. 15, p. 84 (I have not been able to procure a copy of the Greek text): But the earthly body which is named the body of God led those who ate into life eternal, and Christ gave indeed His own body and blood to those who believe, by inserting

But the best illustration of the meaning of the Chalice symbol is supplied by Ephraim the Syrian, who spent the greater part of his life at Edessa and died near that city in 373. The passage occurs in *Hymni Azymorum*, No. 17.¹

م ب ۷۴ ج ۱۰ | ایم : ۷۴ ج
د ۷۴ ج ۱۰ ملکیت نعم | حتمی +
حتمی سوسن ۹۰ | دل ایم
نعم | ملکه ویم ۹۰ | حتمی +
نه | دل ایم سوسن ۹۰ | حتمی +
نه | حرس الهم ۹۰ | حتمی +

Because there "the body is," the Second Adam,
To it are gathered the winged eagles:
*By the spiritual bread each man becomes
An eagle that arrives in Paradise:*
Whoso eats the living bread of the Son,
He flies to meet Him, even in the clouds.

Another striking passage shows how the ancient doctrine of the local pagan cult, that the soul is nourished by fire or aether, still survives as Christian metaphor:²

Of its crumbs one, [as] Preserver, sanctifies a thousand thousands
And suffices for them all. That it may be Life to you who eat it,
Take, eat in faith, and doubt ye not that this is my body,
And whoso eats it in faith, *eats fire and spirit in it*,
And whoso eats it doubting, to him it is simple bread.

Only one of the writers above mentioned, Gregory of Nyssa, advances an explanation of the life-giving virtue of the Eucharist in terms of contemporary science, but, since it has no bearing on the problem of the eagle and the basket, I need not now discuss it.³

In the works attributed to Macarius of Egypt, however, a theory is set forth in which the ancient Syrian conceptions which Ephraim, as he himself elsewhere explains, uses in a metaphorical sense, recur in substantially their original form. God transforms himself into

the life-giving medicine of His Godhead . . . the bread that is tilled in the blessed land of Christ, being joined with the power of the Holy Spirit, at one taste gives a man immortality. For Theodoret see *Interp. Epist. ad Heb.* c. X (P.G. 82, col. 752). For the other authors, quotations and references will be found in the above cited work of Batiffol and in L. Thomassini, *Dogmata Theologica*, Ed. nova, Par. 1868, T. IV, lib. X, c. 31, pp. 474-9.

¹ *Sancti Ephraem Syri Hymni et Sermones*, ed. T. J. Lamy, Mechliniae, Tom. I, (1882) col. 619.

²Op. cit. Sermo IV in hebdom. sanct. I. col. 415.

³ *Or. Cat.* c. 37. J. H. Rawley (*The Catechetical Oration of Gregory of Nyssa*, in *Cambridge Patristical Texts*, 1903, pp. xxxvi sq. and 135) and Batiſſol (*op. cit.* 400-07) recognize the affinity of Gregory's theory with Aristotle's doctrine of nutrition and sustenance (*De gen. et corr.* I, 5). But I do not think Gregory knows Aristotle directly, for he uses none of Aristotle's precise technical terms, and the terms which he does use express Aristotle's ideas imperfectly.

a tenuous material substance similar to that of the soul in order to blend with it, either directly, or indirectly through the Eucharist. Thus God may assume the form of light or fire; He may manifest Himself to the soul in visions, as of the heavenly Jerusalem, or He may be immediately perceived as love, joy, and the like. Only when permeated and transfused by this spiritual substance does the body possess the capacity of resurrection.¹

I have found it necessary to give this brief outline of a little known theory, not wholly appropriate to an archaeological journal, in order to show the essential identity of the ideas expressed to both Christian and pagan by the eagle and the basket, ideas belonging to that group of spiritualistic conceptions which in pagan thought developed into Neo-Platonism and in the Christian first into Gnosticism and later into the Christian philosophies of Clement, Origen and the later Greek Fathers.

In the second third of the fifth century the vivifying power of the Eucharist was one of the subjects of contention in the controversy between Cyril, who was archbishop of Alexandria 412 to 444, and Nestorius, who had been trained in the Antiochian school of theology and was archbishop of Constantinople from 428 until his deposition in 431. Cyril anathematized all who denied this doctrine and Nestorius anathematized all who accepted it,² and thus they brought it into prominence as one of the major doctrines of the Church. It is probably to this circumstance that we owe the two other symbolic expressions of this doctrine which I have been able to find. The ivory pyxis shown in Figure 8, now in the Museo Civico of Leg-

¹ Macarii Aegyptii Opera, ed. J. G. Pritius, Leipz. Two Vols., 1699, 1704.
Hom. IV, cc. 9-13 (II, 47-53): e.g. p. 47, ἐκωματοσκηνέαν ὄπειρος καὶ ἀπόρροτος
καὶ ἀκοίητος θεός. . . . ἡνα συνεωθῆται δυνηθῆ τοῖς ὅραιοῖς αὐτοῦ κτίσμασι, οἷς ψυχαῖς
ἄγλων καὶ ἀγγελῶν ἀκέω, ἡνα δυνηθῶσι ἡῷς θεότητος μετασχεῖν. . . . (p. 48) καὶ ἀναγύ-
ραται καὶ παραλαμβάνεται ῥᾶς ἄγλων καὶ εἰρήστους καὶ πυτάς ψυχάς καὶ γίγνεται μετ' αὐτοῖς
εἴς ἐπικένια. . . . (p. 56) Ηνα ὥραιος ἀτρίας ὁ ἀόρατος καὶ ψυλαράφη κατὰ τὴν τῆσδε
λεπτότητος τῆς ψυχῆς ὁ ἀψήλαφτος¹ καὶ αἰσθωτας αὐτῷ τῆς γλυκύτητος, καὶ τῆς χρηστό-
τητος τοῦ φωτὸς τῆς ἀφρόταντος ἀπόλαυσεως αὐτῇ τέλος ἀπόλαυσιν· δε βούλεται τὸν
γίγνεται, τοῦ πάνον καὶ ἔπειτακτον τάδε τῆς ψυχῆς κατακαίον. . . . δε βούλεται
ἀνάπτωνται ἀδήρτος. . . . δε βούλεται χαρά καὶ εἰρήνη. . . . εἰ δὲ καὶ εἰς ἐπών
μάτων ἑαυτὸν ἀφοιωσθεῖσαι βούλεται. . . . (51) οἰον ἡ πόλις φωτὸς Ἱερουσαλήμ. . . . καὶ
εἰς βρύσων καὶ τόσων. . . . καθὼς γέγραπται ἐν τῷ εὐαγγελῷ, ὃ τρώγων τὸν ποιόν
ζησοταί εἰς τὸν αἵνεαν. . . . (p. 52), οὐτος ἔκστω τὸν ἄγων πατέρων ὄψιν ὡς ηὔδεισκε τ. λ.
(Hom. XI, Book. VI, p. 132) τὸ πῦρ τὸ οὐράνιον τῆς θεότητος δέπερ δέχονται οἱ χριστῶνες
ἐντὸς αὐτῶν ἐν τῇ καρδίᾳ τοῦν τῷ αἰώνι τούτῳ, τοῦτο αὐτὸν τὸ ἐντὸς τῆς καρδίας αὐτῶν
διακονοῦν, γνωστὸν ἀναλιπέσθω μετάληπτον.

The attribution of these works to Macarius of Egypt (d. about 390) is disputed. Stiglmayr thinks the existing collection is a late compilation out of his works, with many interpolations; Flemming attributes them to one Macarius of Bostra, who lived in the early fifth century. For references to the literature see Ueberweg-Baumgartner, *Grundriss d. Gesch. d. Philosophie* (1915), II, p. 138-9; App. p. 64.

Badinger, *Orat. ap. d. Gesch. d. Theologie* (1871), II, p. 105-6; App. p. 62.
2. Cyril. Alex. *Apol. cont. Theod.* No. 11 (P.G., 76, col. 445): εἴ τις ὡδολογεῖ τὴν
τοῦ Κυρίου σάρκα ἵστον ἐτίναι καὶ ἴδιαν αὐτὸν τὸν Καθόλον Αὔγουστον. . . . ἀνέθεμα
ἔστω. Nestorius, *Anathem.* 11 (Loofs, *Nestorianae*, p. 216 quoted by Batiffol, *op.*
cit. p. 473): *Si quis dixerit unitam carnem Verbo Dei ex naturae propriae possibili-
tate vivificatricem esse . . . anathema sit.*

horn, was found at Carthage and first published by De Rossi¹ who assigns it to the fourth or fifth century. Stuhlfauth refers both this pyxis and that of Vienna, of which I shall speak in the next paragraph, to the school of Murano, middle of the seventh century. Christ is shown multiplying the loaves and fishes; four disciples hold food under his outstretched hands for consecration; six others, two on one side and four on the other, hurry away with the consecrated food in their bosoms for distribution. The scene is eminently appropriate, since the pyxis was designed to contain the consecrated bread when reserved or carried to the sick. Not less appropriate, one may be sure, must be the large bird with uplifted wings depicted under the hasp, and, in the light of the evidence already presented, there can be little doubt that it is intended to represent an eagle and



FIGURE 8. IVORY PYXIS (FROM DE ROSSI IN *Bull. d. Arch. Crist.* 1891,
TAV. IV-V)

signifies the immortality co-communicated by participation in the Eucharist. My friend Mr. Wharton Huber, of the Philadelphia Academy of Natural Sciences, who has been so kind as to study these representations of birds from the point of view of the trained ornithologist, informs me that, while those on the chalice and the Syrian tomb-reliefs are certainly eagles, that on the pyxis "is evidently intended for a griffon vulture (*Gyps fulvus*)."² But this would not affect the interpretation, for, according to the popular belief, fish-hawks, vultures, and some other birds of prey which cannot be identified with certainty, were the degenerate descendants of eagles, and it seems to me more likely that the artist, whose lack of culture is suggested by the rudeness of his work, has assimilated the physical traits of his eagle to those of a bird with which he was more familiar, than that he has consciously tried to portray a vulture as distinguished from an eagle.²

¹ *Pisside eburnea Cartaginense* in *Bull. di Arch. Crist.* 1891, p. 47, Tav. IV-V. G. Stuhlfauth, *D. Altchristliche Elfenbeinplastik*, 1896, p. 128; Graeven, *Gött. gel. Anz.*, 1897, 76, 1; v. Sybel *Christliche Antike*, II, 252.

² Ps.-Arist. *De mirab. auct.* c. 60, 834b35: ἐκ τοῦ λεύχου δὲ τῶν ἀετῶν τάτερον τῶν ἔγγόνων ἀλιαίερος γίνεται παραλλάξ (i.e., in alternate broods?), οὐδὲ σύζυγα γένηται. οὐ δὲ ἀλιαίερων φήσι γίνεται, οὐ δὲ τοβῶν περινοὶ καὶ γύνες οὗτοι δ' οὐκέτι διορίζονται τερι (i.e., do not constitute a separate species as against) τοῦτο γύντας, ἀλλὰ γεννᾶσι τοῦτο μεγάλους γύντας οὗτοι δ' εἰσὶ λύγονται.

The Carthaginian pyxis makes intelligible the signification of the "eagle," more properly vulture, carved upon another ivory pyxis which is, or was in 1909, in the Vienna Museum and is supposed to have been made in Syria about A.D. 550 (fig. 9).¹ As in the Carthaginian pyxis, the eagle is placed beneath the hasp. This position, then, is not accidental; either both designs go back to a common archetype or both symbolize the same idea, some such idea as that of the Eucharist being the key to immortality. To the right of the eagle stands a figure with right hand uplifted, suggesting an *orante*, but the left is enveloped in the folds of the garment. Kehler can find no satisfactory meaning either for this figure or for the eagle.²

I venture to think that it is in fact an *orante*, symbolizing the soul which derives its immortality from the Eucharist within the pyxis. The peculiar position of the left hand may be explained as due to the exigency of the space; if the figure is to be kept on the same scale as the others there is no room for an uplifted left hand. On the opposite side of the pyxis is the Madonna and Child enthroned; to the left of the eagle the Child in the cradle with Salome and the beasts, to its right the Magi. The association of the Nativity



FIGURE 9. IVORY PYXIS (FROM H. KEHRER
D. heil. drei Könige, FIGURE 40)

Pliny, *Hist. Nat.* X, 3 (quoted from *Zoologie de Pline*, text and translation, with notes by Cuvier, Paris, 1831): *Haliaeti suum genus non habent, sed ex diverso aquilarum coitu nascuntur. Id quidem, quod ex iis natum est, in ossifragis genus habet, e quibus vultures progenerantur minores: et ex iis magni, qui omnino non generant.*

Cuvier (pp. 370-72) thinks that the *repovós* is the small eagle, the *φίρη* and the *ossifraga* are the same bird, namely the *lämmergeier*.

¹ Hugo Kehler, *Die heiligen drei Könige in Literatur und Kunst*, Leipzig, 1909, II, p. 54. Kehler refers to two earlier publications, E. v. Sacken in *Jahrbuch (Mitteilungen) der Kaiserlich-Königlichen Central-Commission zur Erforschung und Erhaltung der Baudenkmale*, 1876, N. F. Jhrg. II, p. 48, and M. Schmid, *Die Darstellung der Geburt Christi in der bildenden Kunst*, Stuttgart, 1890, p. 120, neither of which is accessible to me. Kehler gives four illustrations of the pyxis (figs. 38-41) of which I reproduce one only (no. 40). See also Stuhlfauth, *op. cit.* p. 126, and Rohault de Fleury, *La Messe V*, 373. Stuhlfauth assigns this also to the school of Murano.

² *Op. cit.* p. 55: *Wer die Stehfigur neben dem Adler sein soll, ist schwer zu sagen. Ein Hirte kann es nicht sein, dagegen spricht schon die Gewandung; der wegweisende Sternengel? Dann hätte er seinen üblichen Platz nicht inne, auch müsste er im siebenten Jahrhundert mit Flügeln dargestellt sein. Vielleicht ist an eine Begleitfigur der Madonna zu denken.* He makes no other reference to the eagle. Stuhlfauth regards the eagle as merely decorative.

with a eucharistic pyxis and with the eagle, a eucharistic symbol, is probably to be explained by the doctrine that the presence of Christ in the Eucharist is to be conceived as a continuance of the incarnation, a conception which became prominent during¹ the Christological controversies of the fifth century.

More doubtful is the interpretation of the central design of the splendid mosaic pavement, measuring six by eight metres (Fig. 10), discovered in the ruins of the fourth century church at S. Maria di Capua Vetere, about three miles south of the modern town of Capua, and published by Domenico Salazaro.² The church was rebuilt about 450 by Symmachus, bishop of Capua, and it is to this period that Salazaro would refer the mosaic. Of the bird and fish in the central circle Mr. Huber says: "It is surely the fish hawk, or osprey, or, as it was known in early times, the ossifrage (*Pandion haliaetus*). The fish is the red mullet or goat fish, the most prized of all fishes in the old days, the fish of Kings' feasts."



FIGURE 10. MOSAIC PAVEMENT (FROM SALAZARO, *Studi, etc.*, OPP. P. 46)

But, since Pliny expressly reckons the fish-hawk as a species of eagle, and since the fish is one of the earliest and most familiar symbols of Christ, especially as received in the Eucharist, there is no difficulty in interpreting the group after the analogy of the chalice group as a eucharistic symbol. An alternative interpretation, however, cannot be excluded. The fish-hawk is preëminently a fisherman, and any one who has repeatedly seen him, as Pliny evidently had seen him and as I have seen him myself during this past summer, drop like a stone from a height of fifty to a hundred feet, dive head foremost under the surface of the water and emerge with a fish in his talons, will habitually think of him in that capacity. And, since in the catacomb paintings fishing with rod or net is a well known symbol of Baptism, it is quite possible that the fish-hawk and

¹ For this doctrine see Thomassini, *op. cit.* Vol. IV, lib. x, c., 22, and Batiffol, *op. cit.* p. 399, 454 *sqq.* Both trace it back to the *de Trinitate* of Hilary of Poitiers, written, according to Batiffol (p. 399, n. 2), between 356 and 359.

² *Studi sui monumenti della Italia Meridionale dal IV° al XIII° secolo*, Napoli, 1871, p. 46. See also Cabrol, *Dict. II*, col. 2073 and fig. 2054. Garrucci, *Storia Vol. II*, pt. 2, pl. 277, 1.

fish is another mode of expressing the same idea. The four chalices in the corners, each accompanied by a pair of doves and a few growing plants, should in that case probably be taken as symbolizing the other chief sacrament, the Eucharist, together with the souls which are benefited thereby and the *refrigeratio* which they enjoy in Paradise, although the chalice-and-doves occurs on even pagan monuments as a merely decorative element.

Salazaro and Garucci (*Storia*, Vol. IV, p. 94) regard the group as forming a baptismal symbol and I incline to the same interpretation. Garucci compares with it the eagles represented on a mosaic of Valence (pl. 277, 2) as defending a lamb and a hare from the attacks of crows, which he interprets, correctly I think, as symbolizing the protection against sin obtained through baptism.¹

The eagle-and-basket symbol is, then, probably of Syrian origin and signifies the widely accepted doctrine that immortality, and in particular the possibility of resurrection in bodily form, is acquired by participation in the Eucharist. This doctrine was taught in the Church of Antioch before the end of the first century and must have originated still earlier. But the fact that it was so generally accepted throughout the early centuries forbids one's taking its expression on the holder as throwing any light upon the date of the latter.

One may, however, ask whether the symbols used to express the doctrine supply any clew to the date.

The basket, representing the bread of the Eucharist, is one of the oldest of Christian symbols; it occurs in the catacomb of Priscilla in the earliest of eucharistic pictures, referred by Wilpert to the beginning of the second century. The combination of the basket with bunches of grapes, as symbols of the wine, does not, so far as I can discover, occur elsewhere than on the chalice.

The eagle, however, has not been found in Christian art prior to the fourth century, and is conjoined with eucharistic symbols nowhere except on the two pyxides which I have described and, possibly, on the Capuan mosaic. None of these is earlier than the fifth century, but the evidence of Ephraim proves that the association was known, in Syria at least, before 373.

It is not difficult to understand the repugnance which Christians must have felt for the eagle as a symbol. In the first place, it was the most familiar symbol of the hated, persecuting Empire, and, in the second, it was itself a pagan idol. The eagle perched upon the standard of the Roman legion was the soldiers' peculiar divinity;

¹ Quite certainly symbols of the resurrection are those birds, more or less resembling eagles, which occur on later monuments in connection with the resurrection of Christ (Garucci, pl. 353, 1; Le Blant, *Les Sarcophages Chrétiens de Gaule*, pl. 55, 1; Garucci, pl. 401, 2, 3, 4) or on coffin lids (Cabrol, II, 2, col. 3280, fig. 2354; col. 1578, fig. 1857).

to it sacrifices were offered and by it the most sacred of oaths was ratified.¹ This fact supplies a negative datum of some importance for the date of the holder. There were, no doubt, at all times individual Christians who did not feel that detestation of paganism which throughout the ages of persecution flames out in the pages of the Apologists, but it is improbable that at any time during that period of 250 years, while the Empire still appeared to the majority of Christians as "the beast that ascendeth out of the bottomless pit" (*Apoc.* 11, 7) and as "the great whore that sitteth upon many waters," "drunken with the blood of the saints and with the blood of the martyrs of Jesus" (*ib.* 17, 1 and 6), the responsible authorities of a great church would have permitted a very "image of the beast" (*ib.* 13, 14) to be placed upon the "cup of blessing which we bless," which is "the communion of the blood of Christ" (*I Cor.* 10, 16).

The holder would, then, probably belong either to the earliest period of the Church's history, before the issuance by Nero of the edict of 64, while Christianity, as a Jewish sect, was still a protected religion, while Paul, the Roman citizen, could still appeal to Caesar from the corrupt judgment of a local court and could still declare to Roman Christians that the powers that be "are not a terror to good works but to the evil" (*Rom.* 13, 3), or, to the age of peace which followed the edict of Milan in 313, when the monogram of Christ had replaced the eagle on the soldiers' standards (Euseb. *Vit. Const.* I, 31, 3) and the Imperial Government had recognized the Christians' God.

With the cessation of the fear, the detestation which paganism had inspired was largely assuaged, and Christians seem to have offered little resistance to the introduction of many pagan ideas and practices by the multitudes of half-converted or unconverted pagans who made haste to join a Church which enjoyed the favor of the Emperors. It is probable that the eagle could have been used as a Christian symbol at any time after the middle of the fourth century without giving general offence.

The decision between these two dates must be based upon considerations which do not belong to my field.²

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¹ Tert. *Apol.* c. 16 (ed. Oehler, I, p. 178): *Religio Romanorum tota castrensis signa veneratur, signa iurat, signa omnibus deis praeponit*. See the passages quoted by Oehler in his note; e.g., Livy XXVI, 48 couples *signa militaria et aquilas*, and Tacitus, *Ann.* XIV, 16, speaks of eagles as *Romanas aves, propria legionum numina*.

² In a popular article written by request for *The Ladies' Home Journal* (Nov. 1924) I have shown that some of the peculiar features of the chalice design, especially the two groups of five each and the asymmetrical position of the second basket, may be plausibly explained by reference to the relations subsisting between the Churches of Antioch and of Jerusalem about the year 50 as described by Luke, and that the ideas expressed by the chalice symbols strikingly resemble those of Ignatius of Antioch.

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Ivory statuette from Corinth. Actual size
PLATE IV

Archaeological
Institute
of America

EXCAVATIONS AT CORINTH IN 1925

PLATE IV

A PRELIMINARY report is here given of excavations made at Corinth in the spring of 1925 by the writer under the general direction of Dr. B. H. Hill, Director of the American School of Classical Studies at Athens. This is a continuation of American archaeological work at Corinth that was initiated by the late Dr. R. B. Richardson in 1896 when he was director of the school. In occasional campaigns since that time important and impressive monuments of ancient Corinth have been uncovered, but the progress of the excavations has always been checked because of limited financial support. It has been the aim of the excavators to discover and identify the buildings mentioned by Pausanias. This aim has often been successfully achieved, but in some instances, after the ascertainment of topographical evidence, available resources were not sufficient for complete clearance of the terrain. This was true of the theatre the site of which was located in the first campaign at Corinth. At that time several trenches dug in the area revealed seats and stairways, and provided evidence for the existence of the Greek theatre and its reconstruction in Roman times. A detailed report of the results attained by these trial trenches was published by Frank Cole Babbitt in this JOURNAL (I, 1897, pp. 481 to 494). Additional work on a small scale was conducted on the theatre site by Richardson in 1902, by Dr. T. W. Heermance in 1903 (*A. J. A.* VII, 1903, p. 350), and by Dr. Hill in 1908 and 1909. As the deposit of accumulated earth is very deep on this part of the site, and as no convenient place for dumping exists in the neighborhood the mass of earth from all these trial trenches was banked beside the excavation with the result that the theatre area has, for some time, been an unsightly section of the excavations. When, therefore, opportunity arose for resumption of work at Corinth on a fairly large scale an obvious duty suggested the removal of these ugly excrescences and a further attempt to uncover, at least, some essential parts of the structure of the theatre.

After preparatory arrangements had been made by Dr. Hill work was begun by me on March 9th and continued until my departure on the 7th of June. Subsequently for three weeks under the supervision of the Director some of the heaps of earth from the old trenches were removed. From May 8th to the 26th C. A. Robinson of the American School assisted at the work. A total of 12,740 car-loads, each containing half a cubic meter of earth, was cleared from the theatre area during the season. The process of clearance here is slow as the earth must be carried for disposal for a distance

something more than four hundred meters. At this distance northwest of the theatre is a cliff, along the top of which the mediaeval fortifications and, perhaps, the ancient wall of the city were placed. Below this cliff is a space for dumping purposes admirably suited to accommodate all the earth that will be removed from the theatre and from any adjacent buildings that may be excavated. At the beginning of the season it required three weeks' time to lay the track from the cliff to the theatre, for, on approaching the theatre, walls of late houses were encountered, which were carefully cleared on both sides of the proposed route in order that nothing of importance

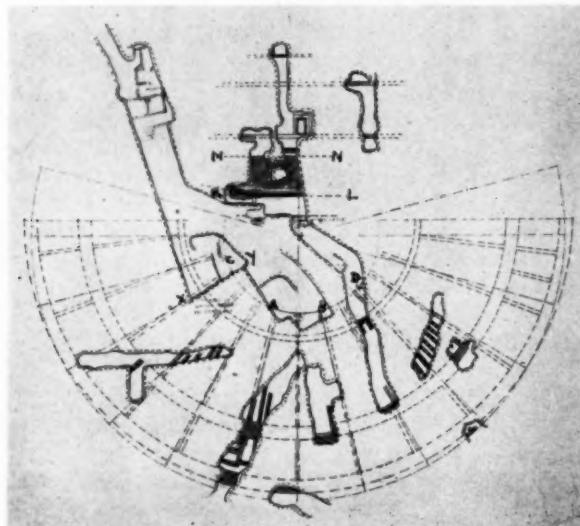


FIGURE 1. PLAN OF THEATRE SHOWING RECENT EXCAVATIONS

should be disturbed. Simultaneously the land to be covered by the projected dump was thoroughly probed for any traces of ancient remains. The direction of the approach of the track determined approximately the place where the excavation of the theatre should begin, and it was hoped that by digging down to the lower rows of the cavea within the hypothetical position of the west parodos some point of identification would soon appear, on which an extension of the work could be based. As the excavation proceeded on a downward slope to an ultimate line marked XY on the plan reproduced in Figure 1, from a drawing by Richard Stillwell after an earlier plan by W. B. Dinsmoor, it was apparent from the loose earth and innumerable small stones and the heterogeneous nature of antique objects that we were dealing with an artificial

"fill." The earth was evidently turned over at different periods, and, in part, may have been carried here from some distance; for at the bottom of the excavation were many late Roman coins and sherds, and even some pieces of Byzantine pottery, while close to the surface were found archaic Greek terra-cottas and two objects of the prehistoric period, a flint tool and a small marble female idol in sitting posture. Apart from the coins, which were carefully studied and catalogued by Mrs. Agnes Baldwin Brett, the most numerous finds were small archaic terra-cotta horses, both with and without riders, doves, deer and female heads and busts. These are similar to the terra-cottas previously found in the theatre and published



FIGURE 2. PAINTED WALL OF THEATRE IN PROCESS OF EXCAVATION

in this JOURNAL by Richardson (II, 1898, pp. 206 ff.). No part of the structure of the theatre remained in the west end of this section and hard-pan was reached at point X on the plan, at a depth of 4.65 meters below the surface of the ground. On the east side a thin wall of stucco came to light, below which were some stone blocks on one of which a facing of blue stucco was preserved, but the significance of this discovery was not apparent until further developments had occurred in the excavations.

In order to maintain a bank for the later extension of the track to the centre of the cavea, operations were transferred to the southeast and digging was pursued along the eventual line marked A-B on the plan, with the aim of reaching ultimately the floor of the orchestra which might be expected to be more or less *in situ*. At a depth of about ten meters below the surface a bank of hard-pan appeared, of which the front was covered with painted stucco. This wall, as far as it has been excavated, is preserved to a height of 1.70 meters,

starting from the level of the orchestra. It is cut by an opening one meter wide exactly in the centre of the curve, opposite the supposed line of the stage building. The wall was cleared for a distance of seven meters on either side of the central passage. The section on the left side, as seen from the orchestra, is shown in Figure 2. At the left end the wall passes under the bank of earth, which still serves as a causeway for the track and could not be removed during the present season. On either side of the opening gladiatorial scenes are painted, which represent in each case groups of two men engaged in combat with a lion. The life-size figures are painted against a blue background, and the whole frieze is framed by three decorative bands of varying widths and contrasting colors. Below the blue field is a band of yellow, horizontally differentiated in shade, with the lighter shade above. This color is undoubtedly intended



FIGURE 3. EAST SECTION OF PAINTED WALL IN THEATRE. LENGTH 3.5 M.

to suggest the sand of the arena on which the contestants are standing, and the manipulation of the tones of color gives a real sense of depth and perspective to the scene. The figured frieze is bordered by a narrow band of blue of a deeper shade than the blue of the background, and this, in turn, is separated by a strip of pink from the deep red outer border. At each end of the wall adjoining the central passage the triple-colored border makes an angle and extends vertically up the face of the wall. No stucco has yet been found on the sides of the passage. At the end of the wall on the left of the opening a man is standing with his back to the spectator, as may be seen in Figure 3 which is reproduced from a water-color by Mrs. Shear. Owing to the ancient cutting away of the top of the wall, and the injury here to its face, most of this figure has disappeared, but enough remains to show that the man is standing, with his legs far apart and his left knee bent, in an attitude of intense action, as he is engaging in combat with a lion charging on him from the left. He is wearing a long purple undergarment on which is superimposed a white garment that is fastened by a decorative knot on the side of the left knee. He wears high crimson boots, and apparently an

end of the drapery is hanging down from the outstretched left arm which held a shield or sword, as presumably a spear was being brandished in the right hand. As this man wears long garments instead of the short clothes of the other contestants, and as he has a purple costume it is evident that he is a magistrate or some official in charge of the games. He is, nevertheless, taking an active part in the combat, in contrast to the quiet stationary attitude of the director of games painted on a similar wall surrounding the amphitheatre at Pompeii (Overbeck, *Pompeii*, 4th. ed. p. 182, fig. 107). To the left of this officer comes a huge tawny lion in violent rush with both forepaws raised from the ground, Figure 4, which is followed behind

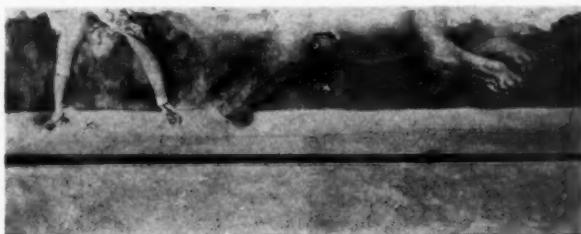


FIGURE 4. SECTION OF PAINTED WALL. LENGTH 3.5 M.

by an attacking gladiator. This man is poised in a position that would indicate that he is about to hurl a spear at the lion. He is clad in a short garment, painted in a mottled red and white pattern, that suggests the skin of a beast. His thighs and legs, which are bare, are given a copper-colored shade, suitable for representing the exposed skin of athletes. Below the right knee he has a white band, and white sandals are fastened on his feet with red thongs.

The section of wall of equal length, uncovered on the right side of the central passage, is decorated in the same color scheme with a group of two gladiators and a lion, but here the figures are differently arranged. The first man, next to the vertical edge of the wall, is running to the spectator's left, and apparently away from the combat, which the gladiator behind him is waging with a lion that advances on his left. These men are each dressed in one short garment, like the gladiator on the other wall, but it is white and not mottled in color. They wear white sandals with red thongs and have white bands below the knees. The representation of the leg muscles of the first combatant and the indication of tense activity in his pose are admirably executed, and suggest the hand of a skilful painter working from familiar models.

The central passageway runs south for one meter and opens into a small chamber, with approximate demensions of one meter by

three, constructed of poured cement, Figure 5. As the cement roof began to show cracks and there was danger of its collapse from the weight of the mass of earth above it, this chamber could not be thoroughly explored and was supported with blocks of stone until the earth above could be removed. In the passageway many bones of cattle were found and several pins of bone and ivory, lying intermingled with ashes of burned wood. It is possible that this small room was used for storage purposes, or for the temporary enclosure of beasts destined for combats, like the small rooms opening from the arena of the amphitheatre in Pompeii (Overbeck, *Pompeii*, 4th ed. p. 179, fig. 103; Mau-Kelsey, *Pompeii*, p. 209). Besides uncovering the painted wall for a total length of fourteen meters, trial digging proved its preservation on a uniform curve in three other places, including the stuccoed block found in the first trench. The architect, Mr. Stillwell, was, therefore, able to take accurate measurements, which show that the wall is on the circumference of the orchestra circle, with a diameter of 36.80 meters. On the north side this circle is tangent to a wall, marked M-N on the plan, Figure

1, which apparently is the back wall of a structure, of which the front wall, K-L, is tangent to a circle with the same centre, which is the hypothetical circumference of the orchestra of the Greek theatre, as determined by Mr. Dinsmoor on the evidence of the converging kerkides of the cavea. The front wall was discovered by Dr. Heermanse in 1903, and near it were several coping blocks, evidently from the top of the wall, which project at the top to protect the stuccoed face below. This wall, surmounted by two blocks, is shown through the excavation cut on the right of Figure 6. The painted surfaces of the separate blocks and the traces of painting on the front of the wall are exactly similar in color scheme to the painting on the circumference wall, so that both walls probably form part of the same building, but it is futile to discuss the nature of this structure before the total clearance of this area, which will be the aim of next season's campaign. But interesting evidence for the durability of the colors is afforded by the fact that, although some of these blocks have been exposed to the weather for twenty-two years, the paint is as bright as on the newly excavated section. After the architectural determination of the circumference of the painted wall it appeared that the thin stuccoed wall, found in the



FIGURE 5. CENTRAL PASSAGE THROUGH PAINTED WALL OF THEATRE

first trench, is set back just three meters from the edge of the great wall on top, and is built on a curve concentric to it. When the significance of the upper wall had thus been ascertained, careful scraping with a knife revealed that beneath a superficial coating of lime its surface is entirely covered with designs painted in red on an orange background. Investigation of this wall was, also, necessarily postponed until next season, but apparently on top of the wall with the combat scenes a space was left for the accommodation of dignitaries in separate chairs, who would, thus, be separated from the mass of spectators, whose seats would rise behind the second wall, and would be protected in front by a metal grill set along the



FIGURE 6. EXCAVATIONS IN FRONT OF STAGE OF THEATRE. VIEW FROM SOUTH

edge of the top of the wall, as was done for a similar arrangement in the colosseum at Rome.

As the structure to which the painted wall belongs is built on the lines of the ancient Greek theatre, its history may be tentatively suggested. When the new colonists began to rebuild the city after the decree of 46 B.C. they used, as far as possible, the remains of former buildings. Although the theatre had been destroyed by Mummius, according to the statement of Vitruvius (*De architectura*, V, 5, 8) its structural elements were evidently still available, but the plan of the lower part was altered to provide an arena suitable for gladiatorial contests, as was done in the theatre at Assos (Dörpfeld und Reisch, *Das griechische Theater*, pp. 149 and 150). This alteration was accomplished by removing some of the lower rows of seats, and by cutting back the slope of the hill into the living rock to form a wall nearly three meters high, which would protect the spectators from the savage beasts, and would, at the same time, pro-

vide much more space for the arena. With a liberal allowance of time for building activity in the restored city the date of this construction might be reasonably placed between 25 B.C. and 25 A.D. Subsequently a Roman theatre was built above this structure, with a different centre for the orchestra and with a steeper rise to the seats. As Herodes Atticus, in the second century A.D., erected the covered odeion above the theatre (Philostratus, *Vita Sophist.* II, 1, 5, p. 237), it is possible that the reconstruction of the theatre itself was effected at the same time. This remarkable polychromy is not mentioned by Pausanias and may have been invisible at the time of his visit. But before it was covered from sight some mischievous



FIGURE 7. EXCAVATIONS IN ORCHESTRA OF THEATRE IN FOREGROUND,
AND SITE OF ATHENA TRENCH IN LEFT BACKGROUND

boy scratched crudely in the stucco a bird with long feathers standing in front of the charging lion on the left wall, and perhaps printed his name a little higher on the wall, where some Greek letters are visible. The major task of next season's campaign will be the clearance of the remainder of this wall, which is still buried for a length of approximately eighty meters.

When Pausanias describes his visit to the theatre section of Corinth he specifically states that close to the theatre was located the sanctuary of Athena Chalinitis (II, 4, 5). As this was a famous sanctuary intimately associated with the legends and history of Corinth the discovery of its site should be important archaeologically as well as topographically. On this quest, therefore, a trench was begun on April 8th southeast of the theatre, extending east and west for twenty-five meters along the north side of the Sicyon road. The trench was kept at a width of five meters at the top, and even-

tually extensions were made to the north at both the eastern and western ends. From April 22d to the end of the season Oscar Broneer, a student of the American School, was in charge of the work in this trench. Figure 7 shows the relation of the excavation in the theatre, in the foreground, to the dump of the trial "Athena trench", which appears in the upper left corner, and behind which, to the left, are the columns of the temple of Apollo. Although the position of the sanctuary has not yet been demonstrably located sufficient remains were found to prove the proximity of a temple, and, consequently, to justify the continuation of excavations in the same neighborhood next year.

Near the surface of the ground a late wall was uncovered which ran longitudinally for about thirteen meters before turning south. In this wall, which was partially removed, Byzantine coins and sherds and two bowls of Turkish pipes were found. At its eastern end was a large dump of marble fragments, which evidently had been broken up for conversion into lime. Some of the pieces were badly burned but most of them showed no traces of fire. The most interesting among the many architectural and sculptural fragments are pieces of a colossal female statue of the Roman period, which have remains of red paint, covered by gilding. Beneath the late wall and the marble dump appeared heavy foundation blocks of an earlier building with an east-to-west orientation. Near the east end of the trench this wall turns north, and in it are built three square bases, which may have been foundations for Ionic columns, as parts of an Ionic column of good Roman workmanship were found near by, Figure 8. Just west of this cross wall a floor is preserved, at a depth of 3.12 meters below the surface of the ground, on which were found two coins of Germanicus, of the type which shows the Emperor in a triumphal chariot and was issued by Caligula in 37 to 41 A.D. (Brit. Mus. Cat. *Coins of the Roman Empire*, I, p. 160, no. 93). Above a lower floor level a little farther to the north a coin of Julius Caesar, similar to that listed in the British Museum Catalogue, *Coins of Corinth*, no. 485, indicates that this lower floor was the Greek level at the time of the re-settlement of the city. This view is confirmed



FIGURE 8. IONIC COLUMN FROM ATHENA TRENCH

by the Greek lamps and the quantity of Greek and Corinthian potsherds found scattered everywhere about the lower levels. On the east side of the north extension of this trench an ancient well gave some evidence of stratification of deposits, and here near some Roman lamps of good workmanship was found a lamp of characteristic Corinthian buff-ware, decorated with red bands on a white slip. As a coin of Agrippina Jr., who died in 59 A.D., similar to no. 560 in the British Museum Catalogue, *Coins of Corinth*, was found near these lamps, an approximate date is furnished for their period.

Objects of greater artistic and archaeological interest were discovered farther north in this same trench. In the northeast corner, at a depth of five to five and a half meters below the surface, was a deposit of one hundred and sixty small round bowls, without handles, made of the buff-colored Corinthian clay and covered with a white slip. These bowls, which are approximately of the same size, with a diameter of 0.06 meters and a height of 0.025 meters, were apparently buried with care, as they lay side by side or in superimposed piles. They are undoubtedly dedications to a temple, or containers for offerings, that were buried at the time of some clearance of the sanctuary. As they have no decoration they do not furnish in themselves any evidence for date, but this is fortunately supplied, within certain limits, by a terra-cotta votive-plaque that was found at the same level near them. This piece, which measures 0.095 m. by 0.08 m., is part of a larger tablet, as only on the right side and the bottom are sections of the moulded frame preserved. It shows on the right side a nude figure with a horse's tail, holding a staff or club in the left hand, and having an animal's skin hanging across the left arm. This figure is starting to the right, with the left leg extended and bent at the knee. He is stretching his right arm to the left, and his head is turned in the same direction, as he looks at a nude man seated on the left. The scene may represent a satyr before Dionysus, or possibly Marsyas before Apollo. The satyr's body is beautifully modelled, with an accurate delineation of muscles and an admirable expression of momentary action. The skill and style of the arrangement of the group, and the craftsmanship exhibited in the execution of the figures, together with the treatment of the folds of the garments, mark this as a fine piece of work that may be dated in the beginning of the fourth century B.C. In this same vicinity many ivory pins were lying, and close by was found an archaic terra-cotta statuette of a youth, of a height of 0.055 meters. The boy is nude, with long hair and almond-shaped eyes. He sits on a base with his left leg bent under him and his left hand resting on the base. His right hand is laid on the right knee, which is drawn up. The figure, which is made of the local buff Corinthian clay, is modelled in the round, but is hollowed a little under the base. It is

evidently very similar to the archaic statuette from Camirus, listed in the British Museum Catalogue, *Terracottas*, p. 117, no. B265. This location also yielded another important and beautiful object, which is reproduced, in the size of the original, on Plate IV from a water-color made by Prentice Duell. This is an archaic conventionalized ivory lion, eight centimeters high, which, in erect posture, may have served as one of the supports of a bowl or of a small table. The ivory is in a state of perfect preservation, as far as its surface and texture are concerned, but the figure is slightly injured on one side at the top. The head is early in appearance, with hair and ears rendered in a conventional manner. The mouth is open and a small hole is perforated in the lower jaw for a supporting rod or chain. A light rectangular base, sloping on one side, is above the head, and under the paw the bottom is smooth. A narrow groove is cut in the back to receive the metal rod that supported the weight of the superimposed object. It is a charming piece of archaic carving that may be the only remaining part of a rich dedication.

While these excavations were in progress it became necessary to despatch several workmen to a spot about a mile west of the theatre, beside the Sicyon road, in order to clear and protect a bit of mosaic pavement there which was in danger of being washed away by a rivulet from a fountain close by. This led to the discovery of a sumptuous Roman villa, of which five rooms were uncovered, all paved with mosaic floors of beautiful and intricate patterns.

The villa stands in a pleasant location, with the rich plain sloping in front towards the Corinthian Gulf, while in the distance behind rises the citadel of Aero-Corinth. It was supplied with excellent water from an abundant spring which flows from a hill of red clay, whence the site is now locally known as Kokkinovrysi. At the east end of the house the atrium, a large room, 7.15 meters square, has a square impluvium in its centre, at each corner of which is a column base. The impluvium is a cement-lined pool, 0.32 meters deep, that was open to the sky, while a roof, supported by the four columns protected the rest of the room. Marks in the floor of the pool indicate that the cement had originally been covered with some kind of a veneering, possibly made of thin plaques of colored marble, such as are found elsewhere in the villa. On each side of the pool a picture, 1.15 m. by 0.95 m. in size, is represented in mosaic, and is surrounded by a mosaic frame consisting of a colored guilloche pattern within an elaborate meander design. The picture on the south side, which is perfectly preserved, shows a herdsman standing beneath an olive tree and playing a flute, while to the right are three oxen, two standing and one lying on the ground. A large yellow cook-pot is placed beside the tree, and green shrubs are scattered over the terrain. Both the figures and the objects are given reddish

brown shadows. There are remarkable attempts at foreshortening in the drawing of the figure of the youth and of the cattle, one of which is seen from the rear, like the pose of a horse on the Alexander mosaic from Pompeii. Landscape is suggested by an irregularly sloping hill in the right background, on which a bush is growing. As the youth wears a leopard's skin this may be a picture of Paris portrayed as a herdsman on the slopes of Mt. Ida. Figure 9 shows this picture reproduced from a water-color by Mrs. Shear. It illustrates in a



FIGURE 9. MOSAIC PICTURE FROM ATRIUM OF ROMAN VILLA. LENGTH 1.15 M.

remarkable way the stylistic characteristics attributed by Pliny (*Nat. Hist.* XXXV, 123 ff.) to the painter, Pausias of Sicyon. Pausias painted by preference small panel pictures of boys, and was famous for his use of foreshortening in the representation of cattle. Moreover, Pliny states that he introduced an innovation in art by painting his ox in a dark color, and that he emphasized the plasticity of his figures by the treatment of light and shade. These qualities are so noticeably present in our picture that it is safe to say that this mosaic is a close copy of a painting by Pausias, or by some member of his school at the neighboring town of Sicyon.

A great variety of colors and shades is secured in the mosaic by the selection of the stones. Besides the red and pink stones a lighter shade of pink is provided by the use of cubes of terra-cotta. The other colors are yellow, white, black, blue and green, all used in

constantly varying shades. The picture on the east side of the atrium represents a goat reclining under a large tree with spreading branches. In addition to the green used here for the leaves the tree has a top of deep brilliant blue, a color resembling *lapis lazuli* that is also found in another room of the villa. After microscopic examination of specimens from the mosaic, Professor Alexander Phillips, of the Department of Geology of Princeton University, reports that the pieces of blue and green are made of glass, and that the stones are limestones of different colors. The cubes used for the background of pictures and for the geometrical patterns are of an average size of one square centimeter, *opus tessellatum*, but smaller pieces of irregular shapes and sizes are used in the composition of figures and groups, *opus vermiculatum*. They are set in a brown-colored cement. The corners of the atrium are large squares, 2.17 meters, with alternating patterns, the southeast and northwest corners having a diamond design, while the designs in the other corners are circular. But though these geometrical patterns in opposite corners are similar the effect is different because the colors are variously distributed. The entire room is surrounded by a band of conventionalized beads and reels in red, outside of which is another band of small black pyramids, and finally a narrow strip of red runs along the base of the walls.

Opening from the southwest side of the atrium is a small room, 3.54 m. by 3.26 m., which has a mosaic gem on the floor. The centre of the design is an upright panel with a standing figure of Dionysus, who holds a thyrsis in his hand and has an ivy wreath in the hair. This panel is framed by the guilloche design that is used around all the pictures of the villa. The outside border about the room is a series of large, black crosses, with four narrow red bands across each bar, set on a white ground. Then comes the rectangle of decoration about the picture. On the north and south sides this is a diamond pattern, while on the east and west the design is circular, the corners being squares made up of smaller red and dark blue squares interspersed with white. The colors all shift in the repetition of the designs on opposite sides.

Northwest of the atrium a doorway leads down to the large triclinium or dining-room, 7.05 meters square, in the centre of which is a panel picture of Europa on the bull, 1.25 meters square, framed by a series of decorative bands. Outside the picture frame the entire floor is covered with a design of crescents having pointed projections in the centre. This is edged by a narrow blue band, outside of which is a broader white border, and finally along the walls a band of red. The simplicity of this pattern is undoubtedly due to the fact that the floor was in large part concealed by the dining couches that must have been placed about the room.

From the southwest corner of the triclinium a doorway leads to a small room, 4.43 meters by 3.41 meters in size, of which the mosaic floor is intact, and part of the frescoed wall is preserved to the height of about a meter on the south side. A view of this room from the southwest is shown in Figure 10. It is the finest room uncovered in the villa. The reproduction in black and white, given in Figure 11 from a water-color by Mrs. Shear, shows the interesting and beauti-

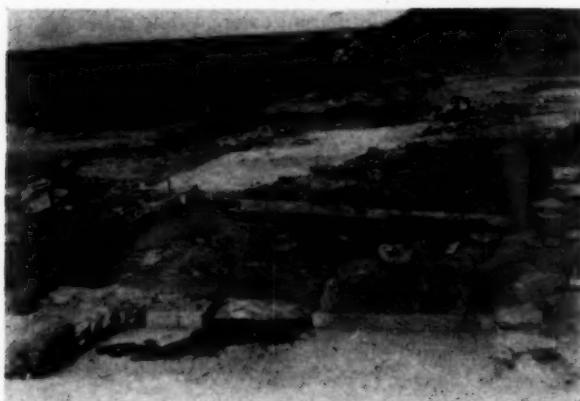


FIGURE 10. VIEW OF ROMAN VILLA FROM SOUTHWEST

ful designs, but conveys little idea of the striking color effect of the original. Bordered by decorative bands of intricate circular, crescent, and diamond motives is a panel, 2.10 meters square, in each corner of which a cantharus is represented with vines extending from it. The cups are colored alternately orange and grey to represent gold and silver vessels, which contain respectively red and white wine. A circular frame of guilloche design is inscribed in this square, within which are concentric circles of pyramids, skilfully colored so as to give the effect of an ornamental, flower-like setting to the centre of the design, which is a small circle, 0.33 m. in diameter, in which the head of Dionysus is portrayed, with ivy leaves and fruit in the hair, in careful and beautiful style. Figure 12 is a reproduction on a small scale of a water-color made in the size of the original by Mrs. Shear. The simplicity and dignity of the head, the skilful representation of the eyes, the shaded flesh colors of the cheeks, and the contrasted arrangement of the green leaves and the mellow fruit in the hair indicate that the mosaic craftsman was executing the conception of an artist, and place this among the best works of Greek mosaic. There is not place in this report for a stylistic and historical study of this magnificent villa, but it must be

pointed out that the head of Dionysus in style, appearance and technical execution bears much relationship to the Dionysus in the mosaic of the house of Dionysus at Delos, and that the circular border with the wave pattern, which also occurs about the picture of Europa in the trielinium, is identical in design with the double border that frames the picture at Delos (*B.C.H.* XXX, 1906, pp. 537 and 538, fig. 14, plate XI). 'A similar arrangement of concentric



FIGURE 11. MOSAIC FLOOR IN ROOM OF ROMAN VILLA

circles about a central picture of Medusa occurs on a mosaic floor that was found at Peiraeus ('Αρχ. Εφ. 1894, plate 4), but the colors of the design in this work are distributed in such a way that the flower-like setting for the picture is lost. The walls of the rooms at Corinth are made of heavy stones set with mortar, and are finished with a painted stucco face. At the base of the walls a marble socle is built of various colored marbles, above which the wall is

painted in a mottled style, red and white or grey and white, apparently to continue the color note of the streaked marble. In the room of the Dionysus head, the walls encroach seriously on the mosaic designs and give an unusual shape to the room. The west wall of this room is cut by a doorway, of which the marble threshold is still in place, through which one passes into a large room to the west. The mosaic pattern of the floor is entirely geometrical, with designs arranged in complex squares. Like the other rooms in the



FIGURE 12. HEAD OF DIONYSUS FROM MOSAIC FLOOR OF ROMAN VILLA.
DIAM. 0.51 M.

villa this floor was covered by a thick deposit of lime and time was not available last season for its complete clearance, which will be effected next year.

Numerous objects of minor importance were found in this villa. The extreme range in date for the coins is from the third century B.C. to the comparatively recent times of the Turkish occupation. There are vases of Roman date, and pot-sherds of many types, some belonging even to the Proto-Corinthian group. Among other finds may be mentioned many stone spindle whorls, ivory pins and clay lamps. Three of the lamps are of a characteristic Corinthian shape with a square nozzle, made of the soft, buff-colored Corinthian clay, which is covered by a white slip decorated with red bands. These are similar to the lamp found in the well of the

Athena trench in proximity to a coin of Agrippina Jr. (59 A.D.), and may be reasonably dated in the middle of the first century A.D. Many Roman remains indicate that the villa was occupied at this time, but it is significant that fragments of Greek lamps were also found, as well as two coins of the third century B.C., and some earlier pottery. The style of the mosaics resembles most closely similar work at Delos which is dated in the third century B.C. (*B.C.H.* XXX, 1906, p. 540), and, therefore, it seems to me probable that the mosaic floors of the villa were made before 146 B.C., and that subsequently they were used in the rebuilding of the house. This view would furnish a plausible explanation for the obtrusion of the walls on the mosaic design of the room with the Dionysus head, and incidentally would add probability to Galen's story (*Protrept.* 8, I, p. 19, Kühn ed.) of the visit of Diogenes, the Cynic, to a friend whose house was paved with valuable mosaics having pictures of the gods.

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THE "DRAGON-HOUSES" OF SOUTHERN EUBOEA

THE small structures in southern Euboea, usually referred to by the name given them by the peasants, are humble things in comparison with the creations of Ictinus and Mnesicles; but they are in admirable preservation, and through the lack of close parallels present an archaeological problem of some interest. Although visited a number of times in the last century, they have recently been neglected: it seems that no photographs of the houses at Stoura have been pub-



FIGURE 1. HUT ON MT. OCHA

lished. The house on Mt. Ocha was well described and illustrated by Wiegand,¹ but in view of the importance of this house it will not be out of place to describe it again and to present additional illustrations.

This structure (Fig. 1) is only a few feet below the top of the mountain; the contrivance which marked the summit, and which is seen behind the "dragón-house" in Wiegand's Plate II, has now disappeared. The hut is oblong, 9.85 m. by 4.95 m. on the inside and 12.70 m. by 7.70 m. on the outside. For the plan see Wiegand, p. 12; I copy his dimensions, which I verified. The hut is built entirely of stone, without mortar or clamps. The roof (Fig. 2) is formed by large, flat stones arranged according to the principle of the corbel vault; each one advances farther than the one below it,

¹ *Ath. Mitt.*, XXI, 1896, 11–17. Older discussions: H. N. Ulrichs in *Annali dell'Instituto*, XIV, 1842, 5–11 (the same as: *Reisen in Griechenland*, II, 252–259); Hawkins in Walpole's *Travels in Various Countries of the East*, 285–293; Welcker, *Kleine Schriften*, III, 376–392 and 553; Baumeister, *Topographische Skizze der Insel Euboea*, 29 f.; Bursian in *Arch. Zeit.*, XIII, 1855, 132–135; Girard, *Mémoire sur l'île d'Eubée*, 74 ff. I have not seen the last-named discussion.

until only a narrow space in the center is left uncovered. Since this construction is employed at the ends as well as at the sides, there is a part at each end which is completely roofed by the large stones. The remaining aperture is 5.76 m. long and was 0.50 m. wide; its original width now remains at only one point, since only one of the uppermost slabs remains on the south side. Except on this south side there are four layers of the roof-slabs; on that side there were only two, but each slab was so cut as to correspond in appearance to the two slabs on the other sides. Above the door, however, the



FIGURE 2. HUT ON MT. OCHA—ROOF

lower slab was omitted, a mere beam serving as substitute on the outer face of the wall.¹ Thus there is a vacant space above the lintel of the door and below the middle of the great roof-slab, the edges of which rest on two slabs of the lower row. The lintel consists of two blocks on the same level. The inner edge of the inner lintel block is given a semi-cylindrical shape. This is the most clearly decorative bit in the whole building; it makes part of the crowning course of the wall, which runs around the whole of the interior. The height of the wall, including this crowning course, is 2.35 m. Wiegand found paving slabs on all four sides of the interior, apparently, and concluded from the treatment of the edges that the center also was paved. Since his visit, digging in the interior has been renewed, and I found only one slab visible and *in situ*; it was at the base of the north wall, between the center and the west end, and was ca. 2.00 m. long, 0.80 m. deep, and 0.10 m. high.

While the early visitors assumed that the present opening in the roof was original, Wiegand rightly judges that it was closed by a number of flat stones. In fact, he found in the vicinity some slabs

¹ See Wiegand, fig. on p. 13, and Hawkins, pl. opposite p. 289, at top.

which, he thought, had served for this purpose; they had circular openings in them, which would have served for the escape of smoke. I did not see these stones, but the suggestion is very reasonable. At all events the presence of windows is sufficient evidence that the roof was closed; and we shall find a few parallels which suggest the same conclusion.

The door and the two windows are in the south side. The door is 2.10 m. high and 1.20 m. wide, the width being the same throughout its height. It is formed by two large jambs and the lintel previously described. Bursian found on the jambs "Canale zur Einfügung



FIGURE 3. HUT ON MT. OCHA—
INTERIOR



FIGURE 4. HUT ON MT. OCHA—
SOUTHEAST CORNER

hölzerner Thürpfosten" but I was unable to discover marks of any sort of attachment. The door is sheltered by the projection over it of the roof-slab. As has been stated, this is the only one of the original uppermost course of slabs which remains on the south side, so it is uncertain whether the others projected in this way; but probably they did not, since there is no such projection on the other three sides.

The masonry of the "dragon-house" is good: the stones are carefully fitted together, and in at least one fallen stone the joining surface shows a distinct anathyrosis. Most of the stones are noticeably flat. In general they are arranged in fairly regular courses of varying height, but there is a good deal of irregularity in the horizontal joints, which gives a certain polygonal character to the masonry. Wiegand's figure on p. 13 shows the interior west wall, which is the

most polygonal part, while Figure 3 here shows parts of the east and north walls. The larger blocks of the exterior are somewhat more regular in their arrangement. In the interior the faces of the blocks are smooth, though not finely dressed. On the outside many of the blocks have a singular sort of rustication (Figs. 1 and 4): there is a narrow smoothed band along the bottom of the block, while the rest of the surface is only roughly shaped—in some cases very roughly indeed. This treatment is surprising in view of the careful fitting of the blocks and the sophistication in building shown throughout. Taken along with the use of long, flat blocks and with the slightly



FIGURE 5. SOUTH HUT NEAR STOURA

Polygonal style of the interior, it gives a distinct individuality to the masonry of the hut.

A climb of about three quarters of an hour from the wretched Euboean village of Stoura brings one to three stone huts¹ which are known to the people, or to some of them, as "dragon-houses." Two of these, facing each other on the north and south sides of a rectangular space, look like clumsy imitations of the hut on Mt. Ocha. The third, on the east side of the quadrangle, is square in ground-plan. The west (downhill) side of the quadrangle is now closed by a rough wall which I take to be modern. All the huts show signs of recent use as sheep-shelters.

The two oblong houses (Figs. 5 and 6) are 9.70 m. long and 3.90 m. wide, on the outside. The blocks of which they are built are usually thin, as in the Ocha hut; this is doubtless due partly to the nature of

¹ Rhangabe in *Mémoires présentés à l'institut*, first series, III, 1853, pp. 220–222 and pl. V; Welcker in *Rhein. Mus.*, IX, 1854, pp. 611–617; this is a summary, with comments, of a description in Girard, *Mémoire sur l'île d'Eubée*, which I have not seen; Bursian, in *Arch. Zeit.*, XIII, 1855, pp. 129–132; Baumeister, *Topographische Skizze der Insel Euboia*, pp. 26 f. He republishes Rhangabe's drawings.

the stone, which divides naturally into such forms. The courses are generally horizontal. Small stones are used for filling in many places. The blocks are only roughly shaped. The doors have no jambs. In the south house there is a noteworthy point of correspondence with the Ocha hut in that the large roof-slab which serves as a lintel (Fig. 5) projects over the door. There are no windows.

The roofs (Figs. 7, north hut, and 8, south hut) are precisely similar to each other and essentially similar to the roof of the hut on Mt. Ocha, though the slabs are much thinner at Stoura. It is to be assumed that the central aperture was closed by cover-slabs in these



FIGURE 6. NORTH HUT NEAR STOURA

cases also. A view of the interior (Fig. 9, north hut) shows clearly the complete structural analogy with the Ocha hut and also the great inferiority in execution. In both huts at Stoura the floor slopes and always did, as is evident from the paving slabs—large, flat, and irregular in shape—which remain. At the upper (east) end of each hut the native rock takes the place of paving.

The east building is 3.90 m. square at the bottom. The lower part of the wall is built up of stones of various sizes. The roof is formed by rather large slabs in five courses, of which each advances inward beyond the course below it as in the oblong huts. In this instance, however, the upper part of the hut is a circular dome. The transition is made simply by placing across each corner one slab of the lowest of the five courses. At the top is left a circular opening 0.60 m. in diameter. This could easily be, and presumably was, closed by a cover-slab. In the southeast corner there still remains a sort of shelf, a thin slab set into the corner. Baumeister saw remains of a similar slab in the northeast corner. There is no window, though Rhangabe's drawing shows something that might be taken for one.

On the exterior west wall of this hut, the masonry is somewhat better than in the other two, but the difference is not great.

Bursian, who ascribed the "dragon-houses" to the Dryopians, grouped with them certain other remains in Euboea. The traveller who journeys to "Archampolis"¹ is rewarded chiefly by the sight of a rugged and picturesque gorge. From the north side of the gorge there is a projection which ends on the west side in a sheer descent to the depths of the ravine. On the north side it is similarly precipitous, though here the drop is comparatively short; previous observers have thought that isolation on this side was secured by artificial

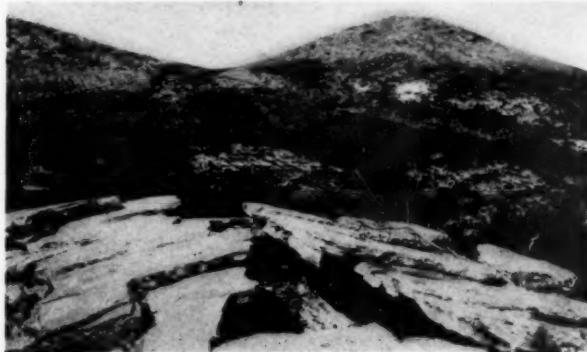


FIGURE 7. NORTH HUT NEAR STOURA—ROOF

means, though that did not occur to me when I saw it. On the south side the slope is gradual in part, making a sort of terrace; but the ascent to this place from below is very difficult, as may be gathered from the remarkable fervor with which it is described by Rhangabe and Baumeister. On the east side a relatively easy approach was constructed: a path, supported by rude walls, affords access to the projecting hill from the north slope of the ravine. On the south slope of this curiously inaccessible hill are some antique ruins.

The early travellers found remnants of a circuit wall on the south and east sides—of course none would be needed on the other two sides—and of some fifteen houses. My visit was hasty and I had not read the earlier descriptions; I can only say that if such remains are there now they must be in a very dilapidated state. But the best preserved structure on the hill is certainly that visible, from close at hand, in Figure 10. In shape it is oblong with an extension at the northwest end. The main (south) front is 12 metres long, the continuation to the west 4.60 metres; the depth at the east end is 7.50

¹ Rhangabe, *op. cit.*, pp. 227–231; Bursian, in *Arch. Zeit.*, XIII, 1855, pp. 136–139; Baumeister, *op. cit.*, pp. 31–33.

m., measured to the inside of the north wall. On the west side the total depth was somewhat greater: the depth of the main part is 4.75 m., of the projection 4.55 m. The greatest height is 3.00 m. The walls vary in thickness from 0.60 m. to 1.00 m. In the southeast corner there is a rectangular construction, a sort of platform; it is approximately on a level with the present top of the wall, which is the ground-level inside the room. This platform is about 2.80 m. by 3.00 m. There is no sign of an entrance anywhere in the walls. The character of the masonry appears clearly in the illustration: stones of very different sizes were used; they always approximate rectangu-



FIGURE 8. SOUTH HUT NEAR STOURA—ROOF

lar form and their long sides are always somewhere near horizontal. The blocks are not closely fitted. Interstices are filled by small stones, which are usually flat and are frequently made into piles of six or more when the space to be filled is tall and narrow. This practice is seen occasionally at Stoura, though to no such extent as at Archampolis; on Mt. Ocha it does not occur at all.

There are several other bits of similar walls to be seen in the ravine, and on a terrace, nearer the sea than is the isolated hill, there are the foundations of a building of considerable size. Its ground-plan is not easily made out. All these constructions are doubtless connected with the copper and iron mines of which traces are still visible; they may have served for store-houses and dwellings of workmen. The ravine ends in a pretty little cove with gently shelving beach. The ore was probably conveyed away by sea, and it was fear of attack that suggested the extraordinary isolation of the buildings on the hill.

Ruins very similar to those at Archampolis are said to exist on

Cape Philagra.¹ Rhangabe² was told of structures somewhat resembling those at Stoura near a village Aminon (or Aminou?), situated on the east coast opposite Stoura. I have not seen either of these sites. Bursian³ would include parts of the wall at Dystos⁴ as examples of the style of the "dragon-houses." There is a considerable variety of style in the walls there, but there is no part that particularly resembles the masonry of the stone huts. The same may be said of the ruins at Archampolis: the ruins there may very well be of the same age as the "dragon-houses," but there is nothing



FIGURE 9. NORTH HUT NEAR STOURA—INTERIOR.



FIGURE 10. ARCHAMPOLIS

in the rude masonry that proves that they are. The group then is reduced to the four structures at Stoura and Mt. Ocha.

There may be some doubt of the propriety of ascribing even these four to one period: there is certainly a great difference in the quality of masonry. Furthermore it must be noted that a method of roofing very similar to that used in the stone huts is now employed in the neighborhood. Figure 11 shows the interior of the chapel of St. Elias, some fifty yards from the "dragon-house" on Mt. Ocha. I also observed two or three sheep-huts in southern Euboea which are roofed in the same way, while I have not seen nor heard of examples of this method of construction elsewhere in Greece. The exact age of these modern structures is not evident; the older travel-

¹ Baumeister, *op. cit.*, p. 33; Bursian, in *Arch. Zeit.*, XIII, 1855, pp. 135 f.

² *Op. cit.*, p. 223.

³ P. 139.

⁴ Described by Wiegand, in *Ath. Mitt.*, XXIV, 1899, pp. 458-467.

lers mention a chapel of St. Elias,¹ but say nothing about its construction. It seems clear, however, that the "dragon-houses," in spite of the loss of their cover-slabs, have received the honor of imitation in periods long subsequent to their own. But this imitation is not close enough to produce similarity in structure and form such as that which binds the "dragon-houses" together. This similarity justifies at least an assumption that the four ancient buildings belong approximately to the same time.

The early travellers assigned a remote antiquity to the "dragon-houses," finding them analogous to the galleries of Tiryns and Mycenaean beehive tombs; while Wiegand, noting the quasi-polygonal masonry of the Ocha hut and the occurrence of anathyrosis, said that it might be later than the sixth century but certainly was not earlier. This conclusion is accepted in the guidebooks of Baedeker and Fougères and I suppose generally. In the guidebooks similar or later dates seem to be assumed for the huts at Stoura. But nobody has cited valid analogies among other monuments; for this there is good excuse, but conclusions reached without such analogies must be largely conjectural.

The chief structural feature is the corbel vault. In regard to it two points may be noted: the courses, as they successively project toward the interior, are not dressed to a continuous surface nor otherwise disguised; and the corbelling does not continue until slabs from the two sides meet, but a space of some width is left to be covered by a central row of slabs. It is also to be noted that three of the buildings are oblong and that the fourth consists of a circular dome placed on a square chamber.

In Mycenaean architecture the corbel vault is much used in the beehive tombs, but the inner surface never shows the projection of successive courses in any such manner as we find at Stoura. In the galleries of Tiryns there is no use of cover-slabs; the top of the passage is closed by the meeting of the inclined walls. No masonry like that of the Ocha hut can be ascribed to Mycenaean builders, nor any structure bearing any sort of resemblance to the oblong "dragon-houses."

In buildings of the classical Greek period examples of the corbel arch, if not strictly of the corbel vault, are not hard to find. In the window of a house at Delos (Fig. 12)² for example, the width of the opening diminishes toward the top, but a considerable space is left to be covered by the lintel. In a portal at Assos³ the space so left

¹ Baumeister, *op. cit.*, p. 29; Welcker, *op. cit.*, p. 553.

² The photograph was made by Mrs. B. H. Hill, who kindly permits me to publish it.

³ *Papers of the Arch. Inst. of America*, I, pl. 27; Clarke, Bacon, Koldewey *Investigations at Assos*, p. 205, fig. 2; Perrot-Chipiez VII, pl. XI.

is proportionately larger and the portal has greater depth. In both these cases the converging walls are given a flat surface. At Phigalia a small gate—and there are said to be others like it—has two courses advancing from each side without any such disguise.¹ From available material it is not easy to estimate the age of these gates; but they, or at least the one illustrated, seem to belong to the older part of the fortifications of Phigalia. To judge from Blouet's illustration of the tower beside this gate and presumably contemporary with it, a date in the earlier part of the fifth century, or even in the sixth, would be reasonable.



FIGURE 11. CHAPEL ON MT.
OCHA



FIGURE 12. WINDOW IN HOUSE
AT DELOS

A tholos tomb is somewhat analogous to the domed hut at Stoura. There is a tomb of the fourth century or later near Kirk Kilisse in Thrace² in which the space at the top, covered by a flat slab, is relatively large, and the corbelling on the inside is emphasized in a curiously artificial way; the wall is a succession of horizontal concave surfaces, of which each includes parts of two courses.

Several tombs in south Russia show the use of corbel vaults in which the projection of successive courses is neither concealed nor in any way elaborated. The "Golden Tumulus"³ is round like the Thracian tomb and Mycenaean tholoi. In the "Melek-Chesme" tumulus⁴ both ground-plan and vault are square: the courses advance toward the interior on all four sides and the space left for the

¹ Blouet, *Expédition de Morée*, II, pl. 2, fig. 2 (Perrot-Chipiez VII, pl. XI).

² B.S.A., XVII, 1910-1911, pp. 76-79 and pl. XX (Hasluck); cf. B.S.A., XVIII, 1911-1912, p. 216.

³ Jh. Oest. Arch. I., X, 1907, pp. 237 f. (Durm); Minns, *Scythians and Greeks*, p. 195.

⁴ Jh. Oest. Arch. I., X, 1907, pp. 240 f. (Durm).

cover-slab is square. This of course is the method used in the three rectangular huts in Euboea. The structure of the tumulus at Kul-Oba¹ was very similar; and Rostovtzeff illustrates² an oblong chamber in another tumulus which is made in the same way. The "Royal Tumulus"³ has a square ground-plan but a circular dome; the transition is effected by five courses which are corbelled out in the corners and fulfill the purpose of pendentives.

All these tombs, along with a number of others found in the same region and more or less similar, are ascribed by Rostovtzeff⁴ to the fourth century. Since many products of Greek art were found in them, this dating rests on solid evidence. In all cases the masonry is excellent, comparable to that of Greek temples of the same period: I do not think that there are any buildings of this sort in south Russia in which the construction is so rude as in the "dragon-houses."

Certain remains in Caria must be considered also: they consist largely of tumuli.⁵ One, of which a drawing is available,⁶ is rectangular in ground-plan and almost square. The four walls all incline inward, the long ones more than the short ones; apparently the rectangular form is maintained throughout the height. The masonry is somewhat rough, and it is not clear whether the projection of the successive courses is disguised or not, nor indeed whether the arrangement of the stones is sufficiently regular to form courses. The contents of this tomb indicate a sub-Mycenaean date. A later and finer tomb⁷ is apparently constructed in the same way, though the description and sketch are none too clear. The interior surface is dressed smooth. This tomb is assigned to the fifth century. Tombs of this type are common in Caria: the photograph of a well-preserved example at Orak-Buki⁸ illustrates clearly the way in which the four walls advance in the upper courses, preserving the rectangular form of the chamber and leaving a comparatively large space (1.60 m. by 1.70 m.; the chamber at bottom is 3.80 m. by 3.50 m.) to be covered by two slabs. In this case the blocks are so roughly dressed that there is no question of disguising or leaving undisguised the projecting courses.

In some tumuli⁹ the principal chamber is round. If these chambers were roofed at all, it was undoubtedly by a corbel vault, but

¹ Minns, *op. cit.*, pp. 195-202.

² *Iranians and Greeks in South Russia*, p. 75.

³ *Jh. Oest. Arch.* I, X., 1907, pp. 233-241 (Durm); Minns, *op. cit.*, p. 194.

⁴ *Op. cit.*, p. 77.

⁵ Systematically discussed by Paton and Myres in *J.H.S.*, XVI, 1896, pp. 242-264.

⁶ *J.H.S.*, VIII, 1887, pp. 66-68 and fig. 3 (Perrot-Chipiez V, fig. 215); *J.H.S.*, XVI, 1896, pp. 264 f.

⁷ *J.H.S.*, VIII, 1887, pp. 79-81, figs. 27-29; also *J.H.S.*, XVI, 1896 pp. 246 f., figs. 19-21.

⁸ *Ann. Scuol. It. At.*, IV-V, 1921-1922, p. 443.

⁹ *J.H.S.*, XVI, 1896, pp. 248-251.

there is doubt whether there was any roof. I am not sure how many examples there are of a rectangular ground-plan surmounted by a circular dome, but one photograph¹ clearly shows this type of construction. The transition is effected simply by placing a large stone across the corner, as in the hut at Stoura.

The extraordinary ruins of Alizeitin² include a house³ consisting of two rectangular chambers. Each is roofed by a corbel vault; only the long walls converge, however, the short ones being vertical. In one chamber there are six converging courses, while in the other the photograph does not make the number clearly evident. Each chamber has a door in the middle of the long side and the smaller one has another in the end. It is worth while also to refer to a corridor in the tomb at Orak-Buki which has been mentioned. The corridor is formed by rough converging courses; but instead of meeting at the top, as in the galleries of Tiryns, they leave a space about half the width of the corridor (perhaps more; I judge from the illustration) which is covered by flat slabs. This of course is the principle employed in the "dragon-houses."

Rostovtzeff⁴ writes, "I have no doubt, although we possess no examples, that the corbelled vault was continuously employed in Thrace, and in Greece and in Asia Minor as well, from the Mycenaean period onwards, for underground buildings and especially for tumular graves." But it is clear that the occasions for such use in Greece would be very rare; and in fact the "dragon-houses," with no better reason for survival than any other stone buildings—the corbel vault would not be used in wood construction—are not saved by the best analogies that can be cited from distinct isolation among the monuments of Hellas. One more domed structure will be mentioned presently, but the closer relatives of the "dragon-houses" are found in south Russia and Caria.

In the former region we have a few elaborate tombs built in good Hellenic style. Though the forms of the tombs may be indigenous, the architectural methods are not the result of any traceable native development, but of imported culture. Fourth century Greeks, acquainted with the principle of the corbel arch, developed it to meet the requirements of funerary customs in south Russia. But it is not established that they ever used it there for structures above the ground; and even the oblong chamber illustrated by Rostovtzeff, though built on the same principle as the "dragon-houses," differs considerably in appearance, e. g., in the greater proportionate height of the courses.

¹ *Ann. Scuol. It. At.*, IV-V, 1921-1922, p. 429.

² *L.c.*, pp. 432-440; *J.H.S.*, XVI, 1896, 199 f., here Paton and Myres suggest that the ruins are not later than the time of Mausolus.

³ Plan on p. 435; photographs of interior on pp. 436-437.

⁴ *Op. cit.*, pp. 78 f.

In Caria the situation is very different. There the corbel vault was used in early times, probably as an inheritance from the Mycenaean civilization, and continued in use for centuries. Moreover, it is not only the structural principle that is common to the "dragon-houses" and Carian buildings: the masonry also is of the same general sort, with much use of flat stones, so that the relation between the Euboean huts and the chambers at Alizeitin strikes the eye at once. Other remains at Alizeitin,¹ show similar masonry; and the occurrence of windows, so rare in Greek houses, should be noted. If the report in the Annuario had contained illustrations of the "dragon-houses" they would have seemed to be in the context to which they belonged, instead of occupying a position apart as they do among Greek monuments. In fact it is justifiable to say that from the historical standpoint they are not Greek, but Carian.

One can imagine how the early travellers would have relished this fact and how eagerly the relations of Abantes, Dryopians, Leleges, and Carians would have been debated. But it is probable that few students will now disagree with Wiegand in his conservative conclusion that the Ocha hut, and hence presumably the others, is not earlier than the sixth century. We are led to inquire when, in historical times, the circumstances were such that monuments essentially Carian should be built in Euboea. In the third and second centuries this might well happen. The Rhodian state was then in its glory. In the treaty of 188 B.C. Rhodes secured political possession of much of Caria; we are not too clearly informed as to the extent of her *peraea* in earlier times nor as to the precise nature of her power on the mainland, but undoubtedly she was in a dominating position.² Rhodes was the chief trading city and maritime state of the Aegean; there were surely many Carians in her service; they and their culture and monuments built by them or under the influence of their methods might easily appear anywhere on the shores of that sea.

There is nothing in the masonry of the stone huts which tends at all to throw doubt on the date which has been suggested. The masonry of the huts at Stoura, indeed, is so rough that it could neither confirm nor disprove any date whatever; but the Ocha house has a distinct character in this respect. The best parallel for its masonry, so far as I know, is found in a tower in Tenos.³ I know it only from Demoulin's illustration; but the long, flat blocks, carefully fitted but very roughly finished on the face, and the occasional use of smaller flat blocks, give an appearance very similar to that

¹ *Ann. Scuol. It. At.*, IV-V, 1921-1922, pp. 432-449.

² See Van Gelder, *Gesch. d. alten Rhodier*, pp. 107, 111 ff., 140 ff and *passim*.

³ *B.C.H.*, XXVII, 1903, p. 258. Demoulin says it is 6.25 m.-square.

of the hut on Mt. Oeha. There is a door at ground-level in the middle of the south side. "Une voûte, large de trois mètres, supportait l'étage supérieur," says Demoulin too briefly. The tower has one feature that does not appear in the Euboean structure: the corners are dressed. This dressing is very common in walls of the fourth century and later. It may have been introduced earlier, but it would hardly be used in such a structure as the tower in Tenos until it was quite usual. The tower then is not earlier than the fourth century and may belong to the Hellenistic period, and this indicates a similar date for the "dragon-house."

A domed structure much closer, geographically, to the Euboean huts than any hitherto mentioned is found in the circular tower of Agios Petros in Andros.¹ It is not necessary here to describe this very remarkable monument: it may suffice to say that there is at the bottom a round, corbel-vaulted chamber, with a hole in the top of which the original size is not now determinable, and that above this chamber there were several stories which were reached by a stair formed chiefly, as is clear in Saucieu's illustration, of large, flat blocks. The interior surface of the vaulted chamber is dressed smooth. In view of the scarcity of corbel vaults in classical Greece it is natural to assume that this tower belongs to the same time and represents the same influences as its neighbors the "dragon-houses." This assumption is strengthened by a consideration of the masonry. The exterior surface consists of long, flattish blocks in courses that are prevailingly horizontal; but the courses vary in height, and are cut into by smaller blocks which are of the same shape as the large ones and, like them, have their long sides horizontal. On the inside of the tower the same general method is followed, but the blocks are smaller and more irregular: the resulting effect is very similar to that of the interior of the Euboean hut. It must be noted that the dressing of the blocks on the outside is quite unlike in the two buildings; nevertheless, the similarity in masonry is on the whole considerable. The use of large slabs for the stair in the tower would be natural to builders accustomed to use such slabs for roofing.

Saucieu assigns this tower to the third century, largely because of its resemblance to another round tower in Tenos,² which bears a dedicatory inscription belonging, as the forms of the letters show, to the end of the third century or a little later. It is stated in the Corpus³ that the block bearing this inscription is inserted in the

¹ Saucieu, *Andros*, pp. 29–33, with photographs of the exterior, the door, and the interior apparently just above the vaulted chamber; Lebas, *Voyage Archéologique, Architecture, îles de Grèce*, pl. II, drawings of exterior, plan, and section; Manatt, *Aegean Days*, pp. 86–89, with photograph of exterior different from Saucieu's; older references in Saucieu.

² *B.C.H.*, XXVII, 1903, p. 259 (Demoulin).

³ *I.G.*, XII, 5, 2, 955.

mediaeval part of the wall, but Demoulin seems to describe it as belonging to the antique part. At any rate it is evident from the illustration that only a few antique blocks are used in the later construction and that they closely resemble the antique blocks which remained in place, and had almost certainly fallen from the upper part. The tower then surely belongs to the end of the third century. Oblique joints between blocks of the same course are more common here than in the tower of Agios Petros and blocks of irregular height are less usual; but there is enough resemblance in the masonry to justify a strong presumption that the two towers belong to about the same time. Though Demoulin does not mention it, one sees in his illustration one of those singular vertical grooves of which there are four on the Andros tower.¹

The masonry of the "dragon-house," if found in a fortification wall, would doubtless be referred to the fourth century or later. The use of flat blocks seems to grow commoner in Greek walls as time goes on. The use of rustication is also a late feature. A marginal drafting on the faces of blocks occurs in early times, for example, in the masonry represented in the "Erechtheum" gable² found on the acropolis; but the practice of allowing the central part of the face to project strongly must be very rare before the fourth century. In Hellenistic walls it is very common. All considerations, then, tend to favor the date previously suggested on historical grounds.

A word may be added on the purpose of the buildings. The early travellers regarded them as temples; but as more and more Greek temples became known this view became less and less tenable. It regains some plausibility when the huts are seen to be of Carian descent; so far as I can discover, no one knows enough about Carian religious buildings to deny the possibility that the "dragon-houses" might belong to that class. The best analogies at Alizeitin, however, were chambers in a house, and it seems at present more probable that none of the stone huts had a religious purpose. We can not be expected to divine just what their purpose was; but it is plausibly suggested that the hut on Mt. Ocha served as home to the watchman for a signal-fire. The ruder structures at Stoura may have been shelters for workmen in the quarries near to them, or for sheep; they would have served this purpose 2100 years ago as well as now.

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¹ A study of a number of round towers has been published by Dragatsis (*Πρακτικά* 1920, 147-172). He distributes them over a long period, from Mycenaean to Roman times. He believes that some features of the Andros tower are later than its original establishment (p. 162), but does not assign a date to it.

² Wiegand, *Porosarchitektur*, pl. XIV.

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EXCAVATIONS AT THE ARGIVE HERAEUM 1925

THIRTY years have now passed since the completion of the excavations at the Argive Heraeum under the direction of Dr. Charles Waldstein (now Sir Charles Walston), the first major enterprise of the kind undertaken by the American School. In four vigorous campaigns from 1892 to 1895 the whole of the sacred precinct of Hera had been cleared to native rock: the foundations of two temples and many other large buildings had been revealed, and in addition an abundant mass of new archaeological material had enriched our knowledge of ancient art—especially sculpture, ceramics, and bronze work. Ranging from the Geometric Period to Roman times in their chronological sequence, these remains had made clear the great importance of the worship of Hera throughout Argive history and had shown that the roots of the cult could be traced back to remotest antiquity. Some remains of the prehistoric age, encountered within the precinct, chiefly foundation walls and pottery, had indeed permitted the Director of the excavations to conjecture that the site had been occupied by a settlement in Mycenaean times; and this conjecture was supported by the discovery on the sloping ridges to the northwest of two Mycenaean chamber tombs, one of which contained a rich store of late Mycenaean pottery. The further exploration of the prehistoric settlement was not, however, undertaken at the time, nor was the search continued for other tombs in the neighborhood. The discussion of the prehistoric material, therefore, occupied only a comparatively small place in the final publication of the excavations at the Heraeum.

In the years which have passed since 1895 the wonderful discoveries of Sir Arthur Evans at Cnossus and of his Greek, Italian, English, and American colleagues in Crete, of the British School at Phylakopi in Melos, of the Germans at Tiryns, the researches of Tsountas, Wace and Thompson in Thessaly, of Professor Soteriades in Phocis, and recently of the British School at Mycenae, to mention only a few, have added a vast amount of material and truly opened a new vista in prehistoric archaeology. In view of this the late Dr. Joseph Clark Hoppin, who was a member of the staff under Dr. Waldstein during the original excavations and who wrote the admirable chapter dealing with the pottery in "The Argive Heraeum," had long ago determined to reexamine the prehistoric remains at the Heraeum in the light of the immense amount of new evidence available from other sites. His original intention was to carry out this undertaking in person; but when it became clear to him that this plan must unfortunately be given up, his eagerness to have the

work done was in no way diminished, and he asked the American School to conduct the excavation, providing a generous sum both for the actual digging and for the publication of the results. The offer was gratefully accepted by the Managing Committee of the School and the excavation authorized for the spring of 1925.

The campaign was planned and carried out in coöperation with the Director of the School, Dr. B. H. Hill, the work in the field being conducted by the writer of the present report. The excavations began March 9 and continued, with the usual interruption for the Easter holidays, until May 9. For the opening three weeks Miss Dorothy Burr, Fellow of the School, assisted in the superintendence of the digging; during the first fortnight of April Messrs. C. A. Robinson, Jr., and Oscar Broneer took charge of work in certain tombs; and Miss Dorothy Cox, who had joined the staff early in April and who made the measured plans and drawings of all the tombs, rendered assistance in overseeing during the concluding phase of the campaign. Mrs. Hill and Mrs. Blegen gave valuable help in the careful work of clearing three of the richest tombs. This account would not be complete without reference also to the services of our capable foreman, George Alexopoulos of Mycenae. To his tireless energy in exploring and his flair for ferreting out the tombs during the month he had at our disposal much of the success of the expedition is due.

The specific objects which Dr. Hoppin had in mind for this campaign were two: namely, first, "to explore thoroughly the ground just above the old temple and to the northwest, running down towards the ravine"; and, secondly, to make a vigorous search for further chamber tombs in the neighborhood of the two discovered by Dr. Waldstein and elsewhere about the site. "In a word my main idea has been to explore the vicinity of the Temenos and see what we can get in the light of our increased knowledge of the Minoan and Helladic Periods."¹

In the campaign recently concluded an effort was made so far as possible to follow out these two objectives mentioned by Dr. Hoppin; and the results will be briefly presented in the following preliminary report:

The exploration of the ground above the old temple was carried out by means of six trial trenches, and traces of prehistoric occupation were everywhere found. The area in question (Fig. 1), rising steeply some few meters higher than the paved platform about the temple, forms the actual summit of the hill and is of no great size. The highest point is a bare outcropping mass of hard limestone, and elsewhere too the surface has been much denuded, the rock being

¹ The quotations are from a personal letter written by Dr. Hoppin in September, 1924.

covered now by only a thin layer of soil. Along the northwest side of the hill the rock ends in a sheer precipice (of no great height) bordering which is a sort of a ledge or terrace hardly more than 3.5 m. wide. It seems to have been much wider originally, but its outer edge has fallen away, undermined no doubt by the wearing away of the stratum of clay lying beneath, and, probably, by quarrying for the huge blocks used in the temple platform. This process of detrition has evidently caused serious destruction all along the north face of the "acropolis" and is well illustrated at the extreme north angle of the hill by a huge pinnacle of rock broken away from the main mass and separated from it by a broad crevasse. On the



FIGURE 1. "ACROPOLIS" ABOVE THE OLD TEMPLE AS SEEN FROM THE NORTHWEST

narrow terrace above the sheer face of the rock the earth is somewhat deeper than elsewhere in the vicinity and the two trenches dug here showed at once that the accumulation was formed by the ruins and débris of a prehistoric settlement. On and just below the surface of the ground quantities of pottery of the Late Helladic and the Middle Helladic Periods were found—this top layer being evidently in a disturbed condition. Immediately below this surface layer, however, a fairly thick undisturbed Early Helladic stratum was revealed, containing fragments of pottery in large numbers and the ruined walls of houses. These walls were built of small unworked stones laid in clay and served as the foundations for the upper part of the structures, made of crude bricks or wattle and daub. Unfortunately, no complete plan of a house could be recovered, as the surviving part of the ledge was too narrow to preserve an entire building. One rectangular room, however, and part of another were cleared, both possessing a hard clay floor, on which lay much broken pottery of characteristic Early Helladic types. These remnants are

sufficient to show that the houses of the period were of small size and were set very close together.

Farther toward the south, in the central part of the area under investigation, the soil was very thin, but here too the prehistoric layer proved in a number of places to lie still in an undisturbed condition. A large rectangular room of a house of the Late Helladic Period was uncovered (Fig. 2), though the rest of the building of which it once formed a part had been destroyed. The walls were thicker and more substantially built than those of the Early Helladic



FIGURE 2. ROOM OF A MYCENAEAN HOUSE

Period mentioned in the preceding paragraph. In the room was found a large water jar of a typical late Mycenaean shape and much shattered pottery covered the floor of clay.

Farther down the slope, toward the southwest, in trench III some disconnected fragments of walls came to light and the usual abundance of potsherds. Among these latter were many fragments of Minyan and Matt-painted wares as well as Mycenaean.

It is therefore clear that the upper part of the hill, on which rose in Greek times the sanctuary of Hera, had at a far earlier date served as the site of a settlement, the history of which can now be traced, though the remains themselves are scanty, through the Early, Middle, and Late Helladic Periods—extending, that is, throughout the whole of the Bronze Age in Greece. The settlement was not, however, limited to this small area. Trenches dug on the lower slopes of the same hill, below the precinct, yielded evidence of similar occupation, although here the proportion of Early Helladic pottery was small, that of Middle Helladic and Late Helladic large. Many traces of prehistoric dwellings were also found in the deeper strata

examined within the precinct in the course of the excavations thirty years ago. There can accordingly be no doubt that the pre-Hellenic settlement on the site, covering the whole extensive hill, was a very large and flourishing one, worthy to maintain its place in the Argolid beside the strongholds of Mycenae and Tiryns and possessed of a citadel of no mean strength. That the vestiges of this town now surviving are so scanty is surely due in large measure to the fact that the site continued for centuries to be occupied by the famous shrine of Argive Hera, in which numerous large buildings were from time to time erected, with the consequent destruction of most of the earlier



FIGURE 3. THE YEROGALARO RIDGES FROM THE HILL ABOVE THE HERAEUM

constructions which had preceded them on the site. At the same time it hardly seems too bold a conjecture to hold that the cult of Hera is itself an heritage from this prehistoric settlement.

The two tombs discovered by the excavations of thirty years ago lay, one on the west side of the ridge which rises just beyond the deep ravine immediately to the northwest of the Heraeum, the other on the west slope of a broader ridge still farther to the northwest across a second smaller ravine. These two fairly broad ridges, which really form one tongue of land, descending from the mass of Mt. Euboea and divided into two parts by the gully mentioned above, are today known by the name Yerogalaro, which appears to apply equally to both. For convenience they will be referred to here as the East and West Yerogalaro ridges (Fig. 3).

A great many trial trenches were dug on both of these ridges during the spring of 1925, all the most likely-looking places being tested for tombs. They resulted in the discovery of one new tomb on the West Yerogalaro ridge, in close proximity to that excavated by Dr. Waldstein, and twelve on the East Yerogalaro ridge. In addition to these Mycenaean chamber tombs, seven Middle Helladic graves

came to light on the East Yerogalaro ridge, and one "chamber tomb" probably of the Early Helladic Period; while the most unexpected result was the discovery at several points on the same ridge of remains of the Neolithic Period.

Further trial trenches were laid out on the upper reaches of the ridge which bears the Heraeum itself, yielding some scanty additions to the neolithic material, some Mycenaean pottery, and two good geometric bronzes, but no tombs. And finally an extensive system of trial trenches on the slopes below the Heraeum toward the south brought to light pottery of the Early Helladic Period, pottery and two graves of the Middle Helladic Period, quantities of Mycenaean potsherds, a considerable mass of material of the Geometric Period, chiefly bronze work and pottery, and a small building, perhaps a foundry (?), probably of Roman date.

These discoveries will be briefly discussed below in their chronological order.

On the broad surface of the East Yerogalaro ridge a roughly circular area was encountered, clearly marked by the intensely black earth filling it. Apparently there was here originally a slight hollow in the soft native rock, perhaps artificially made, which in some way became filled with a deposit, *ca.* 0.80 m. deep, of carbonized matter, ashes, and black earth. It contained also numerous potsherds, some animal bones, part of a large bull's horn, and many small stones. From this small area, approximately 4.00 m. in diameter, four baskets of pottery were collected. It is almost all a rather thick, heavy, handmade ware, not especially well-baked, but usually with a polished surface. Much of it is plain, without decoration; some is ornamented with a belt of simple, incised or scratched patterns along the rim; but the characteristic type is decorated with curious or fantastic designs in red outlined in black—a fabric very closely related to the well-known "three-color ware" of the second Neolithic Period in Thessaly. The material is so shattered that it may not be possible to restore many whole vases, but it is clear that the shapes represented are for the most part those of open vessels decorated both inside and out. This pottery is exactly like that found in the excavation of the prehistoric site at Gonia near Examilia in the Corinthia.

The purpose of the circular depression filled with this débris of the Neolithic Period is not absolutely certain; but the conjecture which suggests itself at once is that we have here the floor of a primitive round hut, the walls of which, constructed of wattle and daub, have totally perished. If so this is the first neolithic dwelling—as the pottery is also the first of this period—yet brought to light in Argolis.

Not far from this "hut-emplacement" four other similar hollows were laid bare, each containing black earth, débris, and pottery of

the same type. These were all much smaller, however, ranging from 0.80 to 1.25 m. in diameter. In one case a ring of small unworked stones surrounded the hollow. Too small to form the floor of even the most primitive hut, these depressions yielded no satisfactory explanation. In all these cases the neolithic deposit was pure and quite undisturbed; there was no admixture of potsherds of later types.

Elsewhere on the ridge (especially in the neighborhood of chamber tomb 9) neolithic pottery was found mixed with Early Helladic sherds. Perhaps a grave had been dug here in Early Helladic times through a neolithic deposit. On the long slope north of the Heraeum hill some further fragments of the neolithic incised pottery came to light, though traces of houses were not revealed in the ensuing search.

The discovery of these early remains may be regarded as one of the most important results of the supplementary excavations at the Heraeum during the past season. For it is now certain that the Argolid too must be included within the sphere of neolithic civilization—a sphere which with the progress of research in the Peloponnesus is steadily seen to be growing larger. It is curious that such remains have never been found at Mycenae or at Tiryns or at Argos itself. At all events it can hardly be purely fortuitous that the hill about which human habitations clustered already in neolithic times should have been known from the beginning of the historical period as the site of the venerable sanctuary of the Pan-Argeive Hera.

One tomb which is almost certainly of the Early Helladic Period was found on the East Yerogalaro ridge. It appears to have been a small chamber hewn in native rock—perhaps a natural cavern rounded out or enlarged. No dromos was discovered, nor was the entrance clearly marked. The whole east side of the chamber had collapsed and the interior had been disturbed by the mass of rock and earth which had fallen into it. In this filling, in which two or three well-marked layers could be distinguished, neolithic and Early Helladic potsherds were found mingled together, but in scanty quantities. An explanation of this has been suggested above. Three skulls, badly crushed in the collapse of the chamber, and in extremely fragile condition, appeared, and there were a few other fragments of human bones, including part of a thigh. None of these lay in order. The three skulls were fairly widely separated: two lay against the side wall of the chamber and the third under a large stone not far from the side. The tomb thus appears to resemble the Early Helladic ossuaries found in 1922 at Zygouries. The small finds were very meagre, comprising only a few bits of obsidian and three spherical stone beads, the latter not pierced through the center, but with a string-hole in a slightly raised

projection from the surface, resembling a lug. No whole vases came to light in the tomb.

On the same East Yerogalaro ridge seven Middle Helladic graves were uncovered. Most of these were immediately below the surface of the ground, and denudation of the soil on this sloping hillside probably accounts for their disturbed condition. One just outside the entrance to the dromos of chamber tomb No. 15 (Late Helladic), and a similar grave on the slope directly south of the Heraeum, however, proved to be intact, and from these the original disposition of these Middle Helladic graves can be recognized. The grave itself

was a simple shaft cut in soft rock or hard pan, just large enough to receive the body, which was laid in it either at full length or more usually in a contracted position (Fig. 4). Very few offerings were deposited in the cist along with the body; they were present in only two graves of the nine here discussed. In one cist were found a fine bronze dagger with portions of its ivory handle, and a pair of bronze tweezers; in the other a single vase—a small jug. Five of the graves contained only a few decayed remnants of bones, and in two instances even the bones themselves had totally vanished.

Over the cist was laid a cover composed of several irregular flat slabs of limestone. In seven cases nothing was found above



FIGURE 4. BONES IN CIST—MIDDLE HELLADIC GRAVE

these cover slabs and had not the two graves mentioned above come to light, this might have been thought to constitute the complete Middle Helladic grave. But deep soil had fortunately accumulated over the two graves in question and here it was found that sepulchral offerings had been deposited above the stone slabs covering the cist. In grave No. 1 there were four vases, shattered but practically complete: two cups of Yellow Minyan and two jugs of Matt-painted ware. The grave just beside the end of the dromos of tomb 15 yielded a Matt-painted jug with a high slender neck, two yellow Minyan cups and fragments of a third. These are very interesting and important examples of Middle Helladic interments for which no

exact parallel appears to have been previously published. If the conclusion is correct that in Middle Helladic burials the sepulchral offerings were often placed above the cover of the grave, it is easy to understand why the objects found within the cists themselves are generally so scanty.

The thirteen Late Helladic tombs, which yielded the most valuable finds of the campaign of 1925, are all chamber tombs of the Mycenaean type familiar from so many other sites—that is, each consists of an entrance passage, a doorway, and a grave chamber, all hewn out of native rock or hard pan. They were found scattered over a fairly wide area, but the distribution does not appear to be entirely accidental; an arrangement more or less in groups may be recognized. The westernmost group—group I—on the West Yerogalaro ridge, consisted of two tombs, one being that discovered by Dr. Waldstein, the other our No. 1. On the east side of the East Yerogalaro ridge lay four tombs side by side (Nos. 2, 3, 4, 13)—group II. Five tombs fairly close together (Nos. 5, 6, 7, 14, 15) on the west side of the same ridge, not far from the second tomb discovered by Dr. Waldstein, constitute group III. Some 100 m. distant toward the northeast, another pair of two, facing south (Nos. 10, 11) form group IV; while No. 12 was found alone much higher up on the ridge, to the north. It may well be that there are still other chamber tombs in the vicinity of the Heraeum, but in view of the many trial trenches dug, it seems unlikely that further discoveries will materially change the topographical grouping set forth above. New tombs will probably be found in new groups.

The exact significance of this system of grouping, which is paralleled by the arrangement of the tombs at Mycenae and elsewhere, is not easy to determine. To a considerable extent it is no doubt conditioned by the nature of the rock which had to be cut. The geological character of the hills about the Heraeum presents a varied alternation of hard and soft formations, with frequent outcrops of compact limestone or conglomerate separated by masses of soft puddingstone or clay. The hard stone was naturally avoided, and the tombs are always found in the softer formations which were easy to cut. But something more is necessary to explain satisfactorily the arrangement in groups. These latter may perhaps occupy plots belonging to related families or to small clans. It does not seem probable, at any rate, that they indicate any clear chronological differentiation, although it happens that three of the four tombs of group II are distinctly early (L. H. II).

Of our thirteen tombs four have a chamber approximately circular in plan; in four the chamber is roughly rectangular; and in five the shape is irregular. The tombs with circular chamber are all early (L. H. I and II) but they are hardly sufficient to allow the

general conclusion to be drawn that all circular tombs are early. Tomb 14, which contained objects of the first Late Helladic Period, is rectangular.

Again in the shape of the dromos there are some differences. In eight cases the dromos is very wide and, though its sides taper inward, has a broad opening at the top. Most of these dromoi are also comparatively short, but in two cases they attain impressive length (almost 18.00 m. in tomb 2, Fig. 5). Three tombs have a long dromos, wide at the bottom, but with sharply tapering sides



FIGURE 5. DROMOS OF CHAMBER
TOMB 2



FIGURE 6. DROMOS AND DOOR OF
CHAMBER TOMB 10

which result in a very narrow opening at the top (Fig. 6). And finally in two cases the dromos is short and tapering and slopes very steeply downward to the doorway. Here again the evidence seems still insufficient to establish safe criteria for determining the relative chronology of the tombs. In the last named group, for example, tomb 1 is early (L. H. I) and tomb 12 late (L. H. III). If any general conclusion may be drawn, it may be that short, broad, open dromoi are likely to be early, and long, tapering, closed dromoi are relatively late.

In size too the tombs show no little variation, ranging from small examples which measure hardly more than 2.30 m. across, to the imposing dimensions of No. 7, measuring *ca.* 5.60 m. from side to side, or No. 2 with a diameter still greater.

Finally we have the chronological order to consider, and the dating here attempted is based exclusively on the objects found in the

tombs. The earliest group of objects, from tombs 1 and 14, belong to Late Helladic I, and the construction of these tombs may accordingly be attributed to this date. On the same kind of evidence tombs 2, 3, 13, and possibly 15 were built at least as early as Late Helladic II, while the remaining tombs, 4, 5, 6, 7, 10, 11, 12, may fall in Late Helladic III.

These chamber tombs were of course not intended for the interment of one person alone, but were essentially family vaults, and in every case no doubt continued to be used for some time. The evidence for this was very clear in many instances, such as tomb 13, for example, where no less than five successive groups of remains could be readily distinguished, ranging from L. H. II to the latter part of L. H. III in date. The number of persons buried in each tomb varied from three or four to more than twelve. Each successive occupant was deposited in orderly fashion somewhere near the center of the chamber (Fig. 7), the bones and belongings of his predecessor being removed to one side or assembled in a small cist dug for that purpose.

In this sense all of the tombs had been disturbed; in each case the original occupant or occupants had been displaced by successors, and without a doubt many valuable objects which had been deposited in the tombs were on the occasion of later interments removed, perhaps by the relatives or descendants of the original possessor. It is almost certainly this form of robbery (if it may be called robbery) which has stripped the majority of Mycenaean tombs of their most precious relics. At the Heraeum, at least, there was in no case clear evidence of plundering from the outside in post-Mycenaean times. The wall closing the doorway of tomb 7 was found partly demolished, with an opening in its upper part large enough for a man to enter. But resting on the filling of large stones in the dromos before this opening was a grave, containing a well-preserved skeleton, almost certainly dating from Mycenaean times. The hole in



FIGURE 7. TWO COMPLETE SKELETONS IN CHAMBER TOMB 3—FROM ABOVE

the doorway therefore seems to be due to carelessness on the part of those who conducted the final burial in the tomb, and not to the attack of later plunderers.

One curious phenomenon, which was observed in no less than five tombs, remains to be mentioned. A layer of ashes, burned bones, charred wood, and black carbonized matter covered the whole floor of the chamber of tomb 7. The pottery, which was utterly shattered, also showed the effects of intense heat. All the contents of this tomb had clearly been destroyed by fire. A similar black layer covered the floor of tomb 14 and here, too, charred wood and bones, pottery with flaked surface, ashes, and carbonized matter gave unmistakable evidence of fire. In tomb 10, likewise, were found large fragments of charred wood, and many half burned bones came to light, though the layer of ashes and black carbonized matter was not so thick as in the two foregoing instances. In tomb 2 no less than three thin layers of black were observed, containing charred matter and burned bones—the layers separated from one another by thin striations of yellow clay. And, finally, in tomb 3, one large heap of bones, pottery, and débris to the left of the center of the chamber—and this was the earliest group of remains in the tomb—gave similar evidence of burning. Thus, though no trace whatsoever of the same condition was found in the remaining eight chambers, it cannot be doubted that fire was occasionally used for some purpose in Mycenaean tombs. The explanation of this curious phenomenon was not very clear. In tomb 7 the fire had certainly been extremely hot and had almost totally consumed the contents of the chamber. In the other cases the flames had surely been of less extent and kept under control. In all these chambers bones untouched by fire were also found—in cists sunk into the floor or in some protected places in the tomb. It does not appear that we are dealing with the practice of cremation, but rather with the employment of fire for fumigation from time to time when a tomb was reopened to be used again.

Tomb 2, distinguished from the others by its decorated façade (Fig. 5), is the largest and most pretentious of those found, and also yielded the richest harvest. The inner end of its broad dromos was coated with fine stucco on which the door jambs and lintel were marked with painted designs. The pattern consists of a vertical row of large connected spirals on each side between the doorway and the side of the dromos, and a similar horizontal row across the face of the lintel. The spirals are fairly well drawn (though not with mechanical accuracy) with large eyes at their centers. The colors employed—blue-black, yellow, red, and blue—were very well preserved. The plaster had been applied directly to the soft rock in which the tomb was cut and, though it had suffered considerable damage and its surface was badly cracked, nevertheless held together

surprisingly well. The lintel had unfortunately almost totally collapsed. The whole of the painted decoration was removed as carefully as possible by Mr. Panayotakis of the Archaeological Service, and it is hoped that it may in time be set up and restored in the National Museum in Athens. Tombs of this type with decorated façade seem to be rare, though two were discovered by Tsountas at Mycenae.

As the present is merely a brief preliminary report, a detailed list of the finds from each tomb would be out of place, and only the more important objects will be mentioned here.

Pottery was found in great abundance; the total yield of vases



FIGURE 8. GROUP OF BONES AND VASES IN CHAMBER TOMB 13

from the thirteen tombs is not far short of 200, the number ranging from four in tomb 6 to thirty-eight in tomb 2. Among these pots are good specimens of the First Late Helladic style, many splendid examples of the naturalistic style of Late Helladic II, including a magnificent amphora with a design of realistic octopuses, and a fine series of Late Helladic III pots illustrating the progressive stages of the late Mycenaean period (Fig. 8).

Objects of bronze came to light in considerable numbers. The most interesting group, from tomb 10, was the equipment of a warrior, comprising three spearheads, a knife, a cleaver, a pair of tweezers, an arrowhead, and a large basin which covered the deposit,—almost all in excellent condition. Plain bronze knives and daggers were discovered also in other tombs and from tomb 3 came a long sword, unfortunately broken.

The most noteworthy and valuable objects of the whole campaign were two bronze daggers decorated with gold and silver inlay on niello. One, from tomb 3, bears on each side of the blade a row of three flying birds—perhaps doves—done in silver, but with eyes of yellow gold, and wearing golden collars. Toward the hilt end of the

dagger the background appears in gold, but until the oxidization is removed the exact representation cannot be determined. The three gold-covered rivets by which the handle was attached are still preserved, though no trace of the handle itself was found. The second dagger, from a cist in the floor of tomb 14, is a well-preserved piece of metal, though no little time and care will be required to clear away the heavy incrustation which now covers much of its surface. On each side of the blade is represented a single spirited dolphin in delicate inlay of gold and niello, giving a very elegant effect. This dagger also still preserves its three rivets at the hilt, but the gold-plated heads are missing. These two daggers are well worthy to take their place beside the famous weapons from the royal shaft graves at Mycenae, and form a noteworthy addition to the extant examples of the work of the best Mycenaean armourers and goldsmiths. They must no doubt be assigned to the latter part of Late Helladic I or the beginning of Late Helladic II, somewhat later than the specimens from the shaft graves.

The chief objects of gold recovered during the campaign of 1925 came from tombs 2 and 3. If such objects had originally been deposited in the other tombs as well, they must have been subsequently removed, on the occasion of the reopening of the tombs for later interments.

Two gold necklaces were found in tomb 2. One consisted, apparently, of twenty-seven beads, eleven larger in the form of a pendant lily and sixteen smaller with a shield-like shape. The beads were found scattered over an area of perhaps one square meter and the order in which they were originally strung is not certain. An arrangement leaving three of the smaller shield-shaped beads at each end of the string and providing an alternation of lilies and shields in the middle gives a good effect. The second necklace consists of twenty-nine small beads, spherical in shape, suggesting pomegranates. These beads, like those of the foregoing necklace, are hollow shells of gold. They are pierced for stringing, and a collar with granulated edge around the string hole is the only decoration.

From tomb 3 came an extraordinarily delicate gold chain and a pair of gold ornaments in the form of a shield, also no less than eight gold-plated rivet heads, apparently from a sword or a dagger which seems not itself to have survived.

Objects of ivory came to light in several of the tombs. They include ornaments in the shape of sea shells (from tomb 2), rosettes (tomb 14), buttons, a sword pommel, and a comb; and some delicate fragments of ivory inlay. The ivory was usually in extremely decayed or fragile condition and could be removed safely only with the greatest care.

From the earlier tombs several gems of hard stone (carnelian) were obtained, cylinders or flattened cylinders in shape, two or three with interesting new designs. The later tombs produced a few ordinary late Mycenaean lentoid gems of steatite.

Many beads of hard stone were found, including some handsome oval specimens of carnelian. The most curious is a very large pendant of carnelian, cut to represent an elephant—a subject which seems to be unique in Mycenaean glyptic art. Unfortunately the figure is not quite complete, the lower part of the head and trunk having been broken away. Along the back of the elephant are three



FIGURE 9. FOUNDATIONS OF BRIDGE (?) OF GEOMETRIC DATE

tiny but deep holes in a row, in one of which was found a pin or filling of gold.

Quantities of beads of glass paste of the usual Mycenaean forms were found in the tombs and not a few of amber, the latter generally in wretched condition. But this brief survey of the finds may be concluded with the mention of a well-preserved Egyptian scarab of glass paste which came to light in tomb 14. The inscription it bears indicates that it is of amuletic character and dates from the early part of the New Kingdom—a chronological cross reference of great value for the dating of the tomb.

To complete this preliminary report of the supplementary excavations at the Heraeum in 1925 it is necessary to mention a few objects of Hellenic date which were discovered in the course of the search for tombs.

One grave of the Geometric Period was found (No. 8) between two of the Mycenaean chamber tombs (7 and 14). It contained a small dish of bronze, fragments of another, some bronze pins and two small vases, but no trace of bones appeared. The grave was a small cist built of unshaped stones.

On the southeast bank of the "Eleutherion" ravine, at the

bottom of the slope to the northwest of the Old Temple, a massive stone foundation was investigated, perhaps the substructure on which an ancient bridge was carried across the gully (Fig. 9). The foundation proved to date from the Geometric Period. Close beside it at a depth of 1.30 m. a small deposit of bronzes was brought to light. It included a splendid griffin's head, 0.13 m. high, well preserved and with a fine patina, which had probably once served as a handle of a large bronze vessel; also a small figure of a bull, 0.104 m. long, equally well preserved and with good patina, the body fairly well modelled and covered with incised decoration in the geometric style. This figure too had probably originally been attached to a vessel of large size.

On the sloping ground below the Heraeum toward the south many trenches were dug, which everywhere yielded quantities of geometric bronzes. These were for the most part wires and long pins or spits, some of astonishing length, or disks of thin bronze of various sizes, some plain, others bearing decorations of rosettes or other figures. A rectangular pit cut in rock to a depth of 3.40 m. was discovered and cleared; the débris filling it contained a very large quantity of these bronzes, also a small human figurine, a curious ornament or attachment of bronze, representing a row of birds—perhaps ducks—seated on a cross bar, a dagger of iron, small ornaments of ivory and bone, and some very choice geometric and proto-Corinthian pottery. All these objects from the south slope are no doubt discarded votive offerings from the Temple of Hera.

Among other incidental finds should be mentioned a few small fragments of marble sculpture, probably shattered bits from the metopes of the later-temple of Hera (fifth century B.C.).

From the foregoing account it will be seen that the supplementary excavations at the Argive Heraeum resulted in a most gratifying success. This success must be regarded as the real achievement of the scholar who, though stricken himself, persisted in his determination to have the campaign carried out in the hope of elucidating some of the problems which had remained unsolved in the field where he had distinguished himself in his youth; and whose enthusiasm and encouragement and generous financial support alone made the undertaking possible. One cannot but regret that untimely death took him away before he had an opportunity to hear of the successful issue of his labor of love and to realize the import of his new contributions to archaeological knowledge. In conclusion it may be hoped that the final publication of the results of his last excavation may speedily appear in a worthy form as a tribute to the memory of Joseph Clark Hopper.

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THE LATIN INSCRIPTION FROM ANTIOCH

IN the AMERICAN JOURNAL OF ARCHAEOLOGY¹ for 1924 Professor David M. Robinson gave notice of the discovery of an unusually important Latin inscription, an edict limiting the price of grain, at Pisidian Antioch, and in the current number of the *Transactions of the American Philological Association*² he has published the inscription at some length and with three splendid photographic facsimiles. With the edict proper I am not here concerned, but with the *cursus honorum* of a governor which accompanies the edict.

The document as a whole is in three columns. In the first appears in comparatively large letters the senatorial cursus of a certain Rusticus; in the second in much smaller letters, the edict is given in full; in the third at the top appears simply, RUFO. PROC. AUG., then a large blank space, and, near to the bottom of the stone, TIBERIA . PLATEA, denoting the place in the city where the stone was set up.

The cursus begins: *Gal. Rustico. cos. leg. Imp. Caes. [Domitiani.] Aug. [Germanici.] pro. pr. provinciarum. Capp. Galat. Ponti.*, etc. The edict begins: *L. Antistius. Rusticus. leg. Imp. Caesaris. Domitiani. Aug. Germ. pro. pr.*, etc. Robinson terms the Rusticus of the cursus Galerius Rusticus, and differentiates him from L. Antistius Rusticus of the edict.³ In his earlier paper he speaks of Galerius Rusticus as a consular legate, and of L. Antistius Rusticus as a praetorian legate.⁴ But obviously *Gal. Rustico*, "the writing of whose name," Robinson says, "in this shortened way shows the influence of the Greek over the Roman practice," should be read, interpreting the very common Roman form of abbreviation for the tribe, *Gal (eria) (tribu) Rustico*, and we have in the two columns one man only, *L. Antistius Gal. Rusticus*. On another stone above the line which now heads the cursus inscription may have been cut, L. ANTISTIO. L. (?) F. Such a line would about equal the other lines in length.

The identification is supported, if support is needed, by the fact that the cursus of *Gal. Rusticus* is on the same stone with the edict of *L. Antistius Rusticus*, and is in much larger letters. The stone was obviously set up not to publish the edict, but to honor the man who made the edict. The cursus in fact ends with the reason for putting it up, *quod [ind]ustrie prosplexit annon(ae)*. Clearly the price regulation of the edict had been successful, and in consequence a

¹ A.J.A., XXVIII (1924), pp. 435-444.

² T.A.P.A., 55 (1924), pp. 5-20, and plates I-III, following p. 248.

³ T.A.P.A., p. 16.

⁴ A.J.A., p. 441.

grateful people honor the governor in this tablet. Just before this final clause Rusticus is termed *patronus coloniae*, an honor which may very possibly also be associated with the favorable effect of his edict.

Another error in reading the stone occurs in lines 7 and 8 of the published text of the *cursus*. Robinson reads: *proco(n)s(uli) . provinciarum . Hisp(aniae) . et . Baetic(ae)*—"the provinces of Hispania and Baetica," a strange phrase. The ET before *Baeticae* should be read LT and should be preceded by V for which there are plain traces and adequate space on the stone. In fact, unless line 8 is curiously indented, there is need of another letter at the beginning. ET then is properly VLT, and we read: *proco(n)s(uli) . provinciae . Hisp(aniae) . Ult(eroris) . Baetic(ae)*. Baetica is properly so termed.¹

Robinson concludes, apparently because Rusticus' offices appear in the descending order with the consulship first, that "he held the highest office of consul after he had been *legatus pro praetore* of the provinces mentioned." But of course the consulship regularly appears immediately after the personal name no matter what the order of offices, and its appearance here is simply a proof, and a good proof, that Rusticus was a consular legate of Cappadocia, Galatia, etc. To this point I shall return.

The expression *adlecto . inter . praetorios* Robinson translates by "appointed to the Praetorian Guard," and refers to it in his commentary as "the *adlectio* to the Praetorian Guard." But the phrase has nothing to do with the Praetorian Guard. It states simply that Rusticus had been appointed to all the rights and privileges of an ex-praetor, "chosen among those of praetorian rank." He had been given "by the deified Vespasian and the deified Titus" a splendid boost up the ladder of office, for he evidently skipped the quaestorship and the tribunate of the plebs, as nothing is said of these offices on the stone.

A study of Rusticus' *cursus* presents additional points of interest. The date of his consulship is not known; but we can get a fairly definite date, from which to calculate, in his command of the Eighth Augustan Legion, which he held under "the deified Vespasian and deified Titus and Emperor Caesar Domitian Augustus Germanicus." This office plainly belongs at least to the years 79-81 A.D. Before this period Rusticus had been *curator* of the Aurelian and Cornelian Roads, had been chosen among those of praetorian rank, had been given various military gifts of honor by Titus and Vespasian, evidently while serving as *tribunus militum* in the Second Augustan Legion. This legion was stationed in Britain. Probably Rusticus' service there was completed before Agricola went out as

¹ See Dessau, *Inscriptiones Latinae Selectae*, nos. 103 and 1016.

governor, but he may well have served under the famous Iulius Frontinus who subdued the Silures in the South of Wales.¹

After his command of the Eighth Augustan Legion, circa 79–81, Rusticus was proconsul of Baetica, then prefect of the treasury of Saturn, then doubtless consul, then governor of Cappadocia, Galatia and adjuncts, the position he held when the inscription was cut. Three years would be a modest minimum for the offices held in the period between his command of the legion and his governorship. He could hardly have begun his term in Cappadocia before the year 85 at the earliest. So far the inscription alone will take us.

Robinson has properly applied Martial IV, 75 and IX, 30, published perhaps in 88 and 94 A.D. respectively, to the dating of the edict. The first poem refers to the marriage of Nigrina, and the second, to the death of her husband Antistius Rusticus "in the cruel regions of the Cappadocians." Evidently Rusticus died while governor of Cappadocia. The date of his death might then be in 93 or 94. The beginning of his governorship could not reasonably be put more than five years before at most, and would follow his marriage, which took place in Italy about 88. So much from Martial. A tomb-stone inscription cited by Robinson (p. 10) gives the name of Rusticus' wife as Mummia Nigrina.² Adequate evidence is not at hand to associate Rusticus with the well-known Antistius Vetus family, although the consuls of the years 28 and 55 from the family both had the praenomen Lucius.³

Additional evidence for dating the term of Rusticus should be submitted from what may be learned of the terms of other governors of Cappadocia about this time. T. Pomponius Bassus is established as governor as early as 95/96 A.D.⁴ Known to have been consul suffectus⁵ at Rome in September, 93, he probably succeeded Rusticus in 94. Certainly he can not have succeeded to the office before the last half of 93, after his own consulship. Tiberius Iulius Candidus Marius Celsus has been with probability assigned as governor of Cappadocia to the year 90, with possibly a year or two in addition.⁶ Rusticus' term may therefore with reasonable certainty be limited to the years 92–94.

Rusticus' cursus adds one other definite item of information to our knowledge of the government of a group of territories which are listed in full in his, and in other cursus inscriptions. He was a consular, not a praetorian, governor of Cappadocia, Galatia, Pontus, Pisidia, Paphlagonia, Armenia Minor, Lycaonia. Pomponius

¹ Tacitus, *Agricola*, 17.

² *C.I.L.*, VI, 27881.

³ W. Liebenam, *Fasti Consulares*, pp. 11 and 13.

⁴ *Prosopographia Imperii Romani*, s.v. *T. Pomponius Bassus*; Dessau, 5840.

⁵ Liebenam, p. 17.

⁶ Pauly-Wissowa, s.v. *Ti. Iulius Candidus*; *C.I.L.*, III, 250.

Bassus was also a consular, and Iulius Candidus. Therefore at least in the last part of the reign of Domitian the province was consular.

It should be consular if two legions were stationed in it, as was apparently the case.¹ But legates of praetorian rank in this province are definitely known, and, as they are not termed legionary commanders, a natural supposition is that they were governors. For instance, C. Antius Aulus Iulius Quadratus is known from several inscriptions (in Greek) as *legatus Augusti provinciae*, when he was ex-praetor.² But he is never termed *pro praetore*, and the omission is significant. He was almost certainly a legate under the governor. From his cursus he may well have served under Iulius Candidus, or less probably under Rusticus. Earlier M. Hirrius Fronto Neratius Pansa is established as governor in the year 79 before the death of Vespasian, and he very probably governed under Titus³ also. In the same province Ti. Iulius Celsus Polemaeanus as ex-praetor was legate of the deified Vespasian and of the deified Titus, that is at the same time as Hirrius Fronto. Polemaeanus too is not termed *pro praetore*, though this may be of no significance in his case because the expression is lacking even in connection with his command of a legion.⁴ However, he was only an ex-praetor, and surely must have served as subordinate to Hirrius Fronto. As praetorian legates would scarcely be subordinated to others of the same rank, the appointment of consular governors, on this evidence, for Cappadocia and Galatia goes back at least to the end of Vespasian's reign. Of the consulship of A. Caesennius Gallus, governor circa 80–82, nothing is known.⁵ But we may with some degree of assurance conclude that C. Pompeius Collega, known as governor in 76, was a consular, for as early as 69/70, probably as commander of a legion, he was temporarily in charge of Syria, and therefore may well have held the consulship between these dates.⁶ It appears then that Cappadocia with Galatia and the other sections was under consular governors throughout the period of the Flavian dynasty.

In column III of the stone *Rufo. Proc. Aug.* is cut in large letters. Doubtless this Rufus was Imperial procurator at the time of the publishing of the edict, and may have been concerned with the enforcing of it. Curiously the lettering is comparatively poor, and no cursus follows, though there is space to match the space filled by the cursus of Rusticus. Robinson suggests that a stone placed on

¹ Domaszewski, *Rangordnung*, pp. 178–179; *Rh. M.* 48 (1893), p. 244 ff.

² Dessau, 8819; Pauly-Wissowa, s.v. *Antius*.

³ Cagnat, *I.G.R.*, III, 125, and 223; *P.I.R.*, s.v. *Hirrius*.

⁴ Dessau, 8971; *L'Année Épigraphique* 1904, 99; 1905, 120.

⁵ *C.I.L.*, III, 318, 12218, and 14184 (48a); Dessau, 263 and 268.

⁶ Dessau, 8904 and 998. Incidentally Collega, like Rusticus, was *patronus* of Antioch in Pisidia. Tac. *Hist.* II, 81; Suet. *Vesp.* 8.

top of the existing tablet "bore the honors and the *nomen* of Rufus."¹ Very likely a stone above gave the other elements of Rufus' name along with the missing parts of Rusticus' name, but I doubt that Rufus' cursus would there appear.² The blank space on the existing stone was for that. The appearance of only the common cognomen, Rufus, makes identification difficult. Robinson says: "We cannot tell whether he is the same as the Rufus who was proconsul of Asia under Domitian".³ Such an advance from the Equestrian to the Senatorial career would be most unusual. And that Rufus could have gone in the four or five years that remained of Domitian's reign from Cappadocian procuratorship to the governorship of Asia, one of the plums of office at the summit of an ex-consul's career, is simply out of the question.

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¹ *T.A.P.A.*, p. 5.

² We may soon know, as Robinson at the end of his paper announces, that Sir William Ramsay may have discovered the missing first lines.

³ *T.A.P.A.*, p. 20.

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THE ATHENIAN QUOTA LIST I.G. I², 216

THE quota list which is now given in the *editio minor* of the Corpus as I.G. I², 216 appeared in the earlier edition as I.G. I, 257, and the prescript of Col. I, lines 42–43, was restored by Kirchhoff to read:

[Πόλε[ς ἀσ]οι
[ἰδι]ό[ται ε]τ[α]χ[σαν].

Koehler had suggested before him the restoration:

[Πόλε[ς ἀσ]οι [ἰδιόται]
[φόρο]ο[ν ε]τ[α]χ[σαν φέρεν].¹

Neither one of these restorations, however, conforms with the spacing of the letters still preserved on the stone, and Wilhelm, commenting on this fact, proposed a restoration, on the analogy of I.G. I², 218, Col. III, lines 45–46, by which the prescript in question should read:

[ταισδε πόλε[σιν]οι
[τάκται φόρο]ο[ν ε]τ[α]χ[σαν].²

Wilhelm's restoration conforms perfectly with the *στοιχηδόν* arrangement of the letters as preserved on the stone. The left margin of the prescript, as determined by *ταισδε* and *τάκται*, is also in perfect alignment with the left margin of the prescript immediately below (lines 50–51):

halde τὸν πόλεον αὐτὲ[ν]
τὴν ἀπα[ρ]χὴν ἀπέγαγον.

But in spite of these indications that Wilhelm's reading is correct, a comparison of this inscription with I.G. I², 211, 212, and 213 will show that the purport of the restorations as proposed by Kirchhoff and Koehler should not be changed. In place of readings which were perfectly correct in sense but epigraphically impossible there has been substituted a reading which is epigraphically feasible but, in itself, improbable.

The suggestion of Wilhelm's reading was due partly to the belief once commonly held that I.G. I², 216 and I.G. I², 218 were from two successive years of the same assessment period (427/6 and 426/5), and that of these two inscriptions I.G. I², 218 belonged to the earlier

¹ Koehler, Urkunden und Untersuchungen zur Geschichte des delisch-attischen Bundes, *Abh. Berl. Akad.*, 1869, p. 61.

² Wilhelm, Urkunden des Attischen Reiches, *Anzeiger der Wiener Akademie*, 1909, pp. 44–45. Wilhelm's restoration has been adopted in the new edition of the Corpus, I.G. I², 216.

year.¹ Analogy then required that the prescripts of 427/6 (*I.G. I²*, 218) should be repeated in 426/5 (*I.G. I²*, 216).

The purpose of this paper is to show, first, that there is no parallel between the appendices of *I.G. I²*, 216 and 218; secondly, that the names of the appendix to which the prescript of *I.G. I²*, 216, lines 42–43, belongs demand a heading in the sense of that proposed by Koehler and Kirchhoff; and lastly, that there is no reason for giving the dates 427/6 and 426/5 to these two inscriptions, or for believing that *I.G. I²*, 218 is the earlier.

The differences between the appendices of *I.G. I²*, 216 and 218 are to be found in the wording of the prescripts as well as in the lists of cities themselves. Wilhelm's suggested restoration for *I.G. I²*, 216 differs from its prototype in the important detail that the name of the eponymous secretary of the board of assessors does not appear in *I.G. I²*, 216. Also, on the analogy of *I.G. I²*, 218, we should expect to find Amorgus in the appendix which lists the cities assessed by the *rākτai*. Instead, it appears elsewhere in the inscription (line 40). And finally, none of the cities of the appendix in question (*I.G. I²*, 216) is found in the complete appendix of *I.G. I²*, 218 from which Wilhelm took his heading. A comparative analysis of the appendices of these two quota lists shows that we are not justified in assuming a group of cities in *I.G. I²*, 216 assessed by *rākτai*, merely because an entirely different group of cities was listed in *I.G. I²*, 218 as assessed in a similar way.

The proposal of this paper is that the word *lōōrāi* be substituted in place of the suggested *rākτai* of Wilhelm and that the prescript of *I.G. I²*, 216, lines 42–43, be restored to read:

[rāiσδε πό]λε[σιν h]οι
[lōōrāi φόρο]ν έ[τ]ρ[α]χ[σαν].

We now have a prescript after the sense of those proposed by Koehler and Kirchhoff, one which satisfies the arrangement of the letters preserved on the stone, and one whose left margin is in alignment with the left margin of the prescript immediately below. It is true that we have substituted a word of seven letters (*lōōrāi*) in place of the word of six letters (*rākτai*) restored by Wilhelm, but three of these seven letters are *iotas*, and the crowding is imperceptible. Moreover, it is necessary only to glance at the prescripts of *I.G. I²*, 211, 212, and 213 to see that the *στοιχηδόν* arrangement of the letters need not be strictly preserved.²

This appendix appears first in *I.G. I²*, 211, as follows:

¹ Cavaignac, *L'Historie Financière d'Athènes au V^e Siècle*, p. xxxvi. The new Corpus, *editio minor*, Vol. I, dates *I.G. I²*, 216 and 218 in 427/6 and 426/5 respectively, but in both cases with some uncertainty.

² For the crowding of *iota* in *I.G. I²*, 218 see Woodward, The Quota-List of the Year 427/6 B.C., *B.S.A.*, Vol. XV, p. 230.

	Πόλες, ἡς ἡ[οι]
	ἰδιότατι ἐνέ[γ]ρα-
	φσαν φόρον
	φέρεν
Δ	Πιλόρος
ΓΗΤΤ-ΙΙ	Κλέονατ
ΔΔΓ	Σίνος
ΔΗΤΤ-ΙΙ	Διακρῆς
	ἀπὸ Χαλκιδέο[ν]
ΓΗΤΤ-ΙΙ	Πιστασος
ΔΔΔ	Σύμε
	Τινδαῖοι
	Κίθας
¶	Σμιλλα
	Γίγονος
	Ηαῖσα
¶	Βίσθικος
ΓΗΤΤ-ΙΙ	*Οθορος

In *I.G. I², 212* the inscription is broken away so that only about half of the appendix has been preserved, but of the four names found in our appendix (*I.G. I², 216*) three are either preserved on the stone or restored with certainty.¹ In *I.G. I², 213* the appendix is still more fragmentary, but the editors have restored with reasonable certainty two of the four names found in *I.G. I², 216*.

ΔΗΤ-ΙΙ [Διακρῆς]
ΔΔ[Δ] [Σύμε]

The stone is broken away beyond this point.

There is only one objection to be raised against our restoration of the prescript in *I.G. I², 216*. The appendix in *I.G. I², 211* contains thirteen names; our appendix contains only four. The explanation of this discrepancy, however, is a simple one, to be sought in the events of the years 432/25 within which *I.G. I², 216* must be dated. During this period the Chalcidic and Bottic regions were in revolt from Athens, and the names of cities found in *I.G. I², 211*, known to have been in the area of the revolt, would have been out of place in a quota list from the period of the Archidamian war.² Pilorus, on the northwest shore of the Singitic gulf between

¹ In line 95 there are numerals ΔΔΔΔΗΤ-ΙΙ[Ι] which do not correspond with any found in *I.G. I², 211*. Consequently, it is impossible to say what name should be restored there. Dahms, *De Atheniensium sociorum tributis quæstiones septem*, diss., Ber., 1904, p. 46, has restored in line 93 ΓΗΤΤ-ΙΙ[Ι] Πιστασος, because of the general similarity of the appendices in *I.G. I², 211* and 212.

² If the names of presumptive rebels do appear, we must suppose that they were in territory recaptured by Athens, as in the case of Πλαυσῆς and Α[ι]ο[λ]ίτης; from another appendix in *I.G. I², 216*. For Athenian conquests early in the war see Meritt, A Restoration in *I.G. I, 37, A.J.A. XXIX* (1925), pp. 26-28.

Assera and Singus, was Chalcidie.¹ Pistasos and Othoros were presumably Bottic.² Tinde, Kithas, Smilla, Gigonos, and Haisa were in Crossaea or on the neighboring coast, and hence in the disaffected area.³ Finally, Sinos has been identified with Sindos at the head of the Thermaic gulf, in the sphere of influence of Perdiccas, who had encouraged the original revolt.⁴

If we subtract the names of these rebellious cities from the complete category of *πόλεις ἃς οἱ ιδιῶται ἐνέγραφσαν φόρον φέρεν* in *I.G. I², 211* we establish as a normal list for the period of the Archidamian War the following group of four names:

Κλεοναὶ⁵
Διακρῆς
ἀπὸ Χαλκιδέου
Σύμη
Βίσσικος

Our restoration in *I.G. I², 216* is confirmed by the fact that exactly these four names make up the list over which we have restored the heading *ταῖσδε πόλεσιν οἱ ιδιῶται φόρον ταχσάμεναι*.

Having established a parallel between *I.G. I², 216* and the earlier quota lists containing appendices, we now turn to the problem presented by the lines immediately preceding the prescript that we have restored. That these lines formed another appendix was recognized by Dahms.⁶ The appearance of 'Αμόργοι[α] in line 40 is proof that the items in question do not belong to the regular Thracian panel which occupies the upper portion of the column, and since Amorgos is found in the special categories of *I.G. I², 211, 212, and 213* under the heading *Πόλεις αἴραι (φόρον) ταχσάμεναι*, Dahms restored the prescript of the appendix in the lacuna above line 37 (*I.G. I², 216*) to conform.

¹ Herodotus, VII, 122.

² West, The Chalcidic League, *Bull. of Univ. of Wis., History Series*, 1912, published 1918, p. 85, note 9, identifies Pistasos with the Istanos of *I.G. I², 64* and locates it in Bottice. It is known to have been a town of Thrace (Steph. Byz., s.v. Βίθαστος). While nothing is known of the location of Othoros, because its fairly consistent record of payments was broken at the time of the revolt, West, *op. cit.*, p. 133 places it in Bottice territory.

³ Herodotus, VII, 123 is evidence for the location of Smilla, just south of Aenea, Haisa (MMS Δισα), and Gigonos in Crossaea. Gigonos was the site of the Athenian encampment before the battle of Potidaea (Thuc. I, 61, 5). Kithas should be identified with the Σκιθαὶ of Steph. Byz. (πόλις Θράκης πλησίον Ηοριδαίας). For Tinde see Steph. Byz., s.v. Τίνιον, ἵσται καὶ Τίνων Θράκης Χαλκιδικὴ πόλις. Being bracketed with the other Cosscean towns in *I.G. I², 211*, it was undoubtedly located near them.

⁴ See Boeckh, *Staatshauhaltung der Athener*, 3rd ed., Vol. II, p. 728; Herodotus, VII, 123; Steph. Byz., s.v. Σίνθος.

⁵ Dahms, *De Atheniensium sociorum tributis quaestiones septem*, diss. Ber., 1904, p. 55. Dahms' restoration Π[λευρῆ] has been adopted in the Corpus. In line 38 should be restored either [Κάσσοι]ο[ι], [Μάλκ]ο[ιουοι], or [Χεδρ]ο[ιλαοι], with the probability in favor of [Κάσσοι]ο[ι], since this city was not in the area of the revolt as were Chedrolos and Milkoros.

In *I.G.* I², 218, however, Amorgos, with two other towns that had regularly appeared in the earlier lists as πόλες αὐταί (φέρον) ταχσάμεναι, is found under the heading ταῖσδε ἔταχσαν οἱ τάκται ἐπὶ Κριτίο? γραμματεῖοντος. Consequently, if our inscription contains a list of cities assessed by the τάκται, as was supposed by Wilhelm, analogy requires that we should restore Wilhelm's suggested prescript above, not below, the name Ἀμό[ργο]ι[ου], so that this name might be included as a city assessed by the τάκται in *I.G.* I², 216 as it was in the list which scholars then dated in the preceding year, *I.G.* I², 218.

But there is a closer correspondence in the general arrangement of the list between *I.G.* I², 216 and *I.G.* I², 211, 212, and 213 than there is between *I.G.* I², 216 and *I.G.* I², 218. In the earlier inscriptions, as in our list, the Thracian panel was followed by two appendices, the second of which contained the names of cities assessed by λοχαῖς. The arrangement of *I.G.* I², 218 was quite different, and there is no reason for preferring the formula of *I.G.* I², 218 to that of the earlier lists suggested by Dahms, especially as we have seen that the second of the two appendices kept the older classifications.

The restorations given in this paper for the special categories in *I.G.* I², 216 involve also the question of the dates of *I.G.* I², 216 and 218.

It was once assumed that only the two years 427/6 and 426/5 were open for the two inscriptions in question. The last quota list of the supposed *lapis tertius* of Kirchhoff was dated in 428/7, and the reassessment of tribute subsequent to *I.G.* I², 216 and 218 occurred in 425/4. It was merely a question, then, of the relative order in which the two inscriptions should be assigned to the two years available. There has been a tendency among scholars to suppose that Thera was brought into the empire only after the expedition of Nicias in 426, and since Thera is mentioned in *I.G.* I², 216 this inscription has been generally placed in the latter year.¹

Since Fimmen's proof that the *lapis secundus* and the *lapis tertius* of Kirchhoff were in fact parts of the same stone,² *I.G.* I², 213 has been correctly dated in 432/1³, rather than in 428/7, and *I.G.* I², 216 and 218 can no longer be definitely dated in 427/6 and 426/5. The years 431/0, 430/29, 429/8, and 428/7 are also open.

¹ Cf. Koehler, Urkunden und Untersuchungen, *Abh. Berl. Akad.*, 1869, p. 146; *idem*, Attische Inschriften des fünften Jahrhunderts, *Hermes*, XXXI, p. 147; Cavaignac, *op. cit.*, p. xxxvi; Woodward, *op. cit.*, p. 240 and note 3; Beloch, *Griechische Geschichte*, I², 1, p. 353 and II², 2, p. 361. On the other hand Dahms, *op. cit.*, pp. 48-49 (before the publication of Cavaignac's book) gives reasons for believing *I.G.* I², 216 earlier than *I.G.* I², 218. His view has been adopted in the *editio minor* of the Corpus, Vol. I, although with some reserve.

² Fimmen, Die Attischen Tributquotenlisten, *Ath. Mitt.* XXXVIII (1913), pp. 231-238.

³ As in the *editio minor* of the Corpus, Vol. I.

Furthermore, it is remarkable that the generally accepted theory about the conquest of Thera has gone unquestioned so long. The passage in Thucydides (III, 91, 1-3) which describes the expedition in question does indeed tell of an attempt to bring Melos into the empire, but it makes no mention at all of Thera, and it is an entirely gratuitous assumption that the expedition of Nicias was concerned with Thera in any way. If the account of Thucydides proves anything about Thera, it proves that Nicias made no attempt, successful or unsuccessful, against the island. But this is, of course, an argument *ex silentio*. Boeckh long ago realized that Thera had become tributary to Athens at some time prior to the expedition of Nicias.¹

The appearance of Thera in *I.G.* I², 216, certainly, cannot be used as evidence for the dating of that inscription in 426/5. There need, then, be no hesitation in following the indications of similarity between *I.G.* I², 216 and *I.G.* I², 211, 212, and 213 and in assigning to *I.G.* I², 216 a date earlier than that of *I.G.* I², 218.²

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¹ Boeckh, *Staatshaushaltung der Athener*, 3rd ed. (Fränkel), Vol. II, p. 444.

² The mention of Methone in *I.G.* I², 216 as paying only the tithe to the goddess shows that the inscription comes from some year after the Methone decree (*I.G.* I², 57 = Ditt. *Syll.* I², 75) by which that privilege was granted, but as the date of the Methone decree is itself a matter of dispute, this problem must be left for discussion in a later paper.

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METHONE AND THE ASSESSMENT OF 430

WHEN the first Methone decree was dated in 428,¹ it was generally thought that 429 was the date of the assessment mentioned twice in the decree as having taken place at the last Panathenaic festival. But recent studies have given new dates to the quota lists on which this hypothesis was based,² and since no new attempt has been made to establish the date of the assessment or that of the Methone decree, the two questions will be considered in this paper jointly.

I shall try to show that the dates ordinarily given are for *a priori* reasons improbable and historically unsuitable, and that we must date the assessment in 430 and the decree during the following year. The evidence on which I shall base these conclusions is taken mainly from the decree itself, the narrative of Thucydides, and the quota lists, particularly *I.G. I², 216*.³

To enumerate, the decree states (a) that there had been an assessment at the last Panathenaic festival,⁴ (b) that Methone owed tribute for one or more previous years,⁵ (c) that the decree precedes the normal time for paying tribute,⁶ (d) that Perdiccas had been encroaching upon the territory of Methone and had been interfering with Methone in other ways,⁷ (e) that he was then on good terms with Athens,⁸ and (f) that there were Athenian soldiers in Potidaea.⁹ From *I.G. I², 216* and 218, we know that the Methone decree precedes the loss of Aioleion and Pleume, two Bottic towns, tributary in *I.G. I², 216*.¹⁰ From Thucydides we get this chronology:

432	Summer Phormio captured several small towns.....	I, 65
431	" Alliance with Perdiccas.....	II, 29

¹ *I.G. I², 57*; Dittenberger, *Syll.²*, 75; Hicks and Hill, 60; cf. Wilhelm, *Göt. Gel. Anz.*, 1903, 775. I shall use Kirchner's version in Dittenberger.

² In particular, Fimmen, *Ath. Mitt.*, 1913, pp. 231 ff., and articles by Meritt and West, *A.J.A.*, 1925, pp. 247–273, 292–298, 434–439. Assessments took place in 438–7, 434–3, and 425–4, but the evidence for the intervening period has not been examined.

³ For the benefit of readers who wish to consult the first edition of the *Corpus*, I give here the numbers of the inscriptions cited in this paper according to both editions:

<i>I.G. I, 38</i> : <i>I.G. I², 65</i>	<i>I.G. I, 255</i> : <i>I.G. I², 208</i>
" 241: " 209	" 256: " 213
" 242: " 210	" 257: " 216
" 243: " 211	" 259: " 218
" 244: " 212	

⁴ Ditt., *loc. cit.*, lines 6 ff., 30 ff.

⁵ *Ibid.*, lines 9 ff.

⁶ Methone and Perdiccas were to send embassies to Athens for the Dionysiac festival, line 25. See p. 441, *infra*.

⁷ Lines 16 ff.

⁸ This may be inferred from the general tone of the decree, but particularly from lines 28 ff.

⁹ Lines 27 ff.; cf. Wilhelm, *loc. cit.*

¹⁰ They are not found in *I.G. I², 218*. Cf. West and Meritt, *A.J.A.* 1925, pp. 434–439.

430	Summer	Chalcidian campaign of Hagnos	II, 58
430-429	Winter	Surrender of Potidaea	II, 70
429	Summer	Blow to Athenian prestige in battle before Spartolos	II, 79
429	"	Secret anti-Athenian intrigues of Perdiccas	II, 80
429	Autumn	Open break between Athens and Perdiccas, and expedition of Sitalces	II, 95

After the expedition of Sitalces, the next datable notice concerning Perdiccas is the second Methone decree, about July 426, from which we infer that Perdiccas had again come to terms with Athens. This is confirmed by a statement of Thucydides¹ that Athens broke with Perdiccas at the time of Brasidas' expedition northward in 424.

Thus the limits for the first Methone decree are the alliance with Perdiccas in 431 and the second Methone decree in the first prytany of 426-5.

Working backward, if we date the decree in the spring or summer of 426 after the payment of tribute of that year, *I.G. I², 216* must date in the spring of 425. This is impossible, for it has been shown that *I.G. I², 218* is later than 216, both being earlier than the assessment of 425.² The latest possible year for *I.G. I², 216* is 427-6.

If we date the decree before the Dionysia in 427-6, we can place *I.G. I², 216* in the spring of 426, but now we shall have to assume that the assessment took place at the Panathenaic festival of 427. This is extremely unlikely, for *I.G. I², 216* and *I.G. I², 218* are from different assessment periods.³ In other words, there would have been three assessments in three successive years, 427-6, 426-5, and 425-4.

If we date the decree in the year 428-7 after the payment of tribute for that year, or in the first prytany of 427-6 before the Panathenaia, the assessment dates in the summer of 428, and *I.G. I², 216* is the quota list of the spring of 426. The most effective argument against such a date is the decree itself which orders embassies to report at the coming Dionysia on a matter of immediate concern to Methone. It is inconceivable that the decree contemplated deferring the settlement of the question nine months or more. This argument applies with the same force against dating the inscription at this season in any year. It should be used also to disprove the date commonly given to the decree by the editors, the first prytany of a year, for even now the Dionysia are about nine months in the future.

Consequently, we must assume that the decree precedes the Dionysia just long enough for ambassadors to go to Methone and the court of Perdiccas, to stay there until they agree or disagree, and

¹ Thuc. IV, 82.

² West and Meritt, *The Athenian Quota List, I.G. I², 216, A.J.A., 1925*, pp. 434-439.

³ A valuable criterion for determining the assessment period to which a given undated list belongs is the form of the prescript. It is possible at times to use the appendices, too. In these respects, *I.G. I², 216* and *218* are quite different. Thus they belong to different periods. For the appendices, see West and Meritt, *The Athenian Quota List, I.G. I², 216, A.J.A., 1925*, pp. 434-439.

then to return, with a sufficient interval for the formalities and the despatch of a return embassy to reach Athens at the Dionysiac festival. We cannot give more than three months to this, and probably two months would have been more than sufficient.¹ Thus instead of dating the decree early in the Athenian year, we must assign it to the late winter months.

If we assign the decree to the winter months of 428-7 I.G. I², 216 may date in the spring of either 427 or 426. The difficulty with this date is the payment of tribute by Bottic towns in the year of I.G. I², 216. We have no reason for thinking that Athens had been strong enough to regain Bottic territory between 429 and 426.

We run into even more serious difficulties, if we date the decree in the winter of 429-8, for this would be about the time of Sitalces' expedition when it would have been very unlikely that Athens and Perdiccas were on terms of professed friendship such as the decree clearly implies. Moreover, it is altogether unlikely that Athens had gained any Bottic territory in the interval since her disastrous defeat before Spartolus. Thus we can eliminate this possibility without question.

Let us now assume that the decree was passed not long before the Dionysiac festival of 429. In this case, the assessment had taken place in the summer of 430. From the Old Oligarch we learn that assessments were made regularly about every four years,³ and as the last two assessments came in 438 and 434,⁴ there is no date more probable for an assessment than 430.

In the second place, the situation as regards Perdiccas and Athens was exactly the one we should expect from our decree. Perdiccas, though outwardly friendly to Athens, was in reality doing all that he could to weaken her position by encroachments upon Methone's territory. In the following summer he was pursuing the same tactics, and during the next autumn Sitalces took him to task for his disloyalty.⁵ That the decree belongs in a period when Athens expected Perdiccas to listen to reason is obvious, and surely Athens would have been unduly naïve to expect compliance with her demands after the failure of Sitalces in 429.

Moreover, our date for the decree fits precisely into the situation at Potidaea. The siege there ended in the winter of 430-29.⁵ Before the capture of the city, there were no soldiers in Potidaea. Like-

¹ Westermann, *Class. Phil.* V, 203 ff., has made an interesting study of the time necessary for ambassadors to go and come from Macedon. On the basis of *ephodia* records, he estimates thirteen days as ample for an embassy subject to no delays. Even the long delayed Athenian embassy to Philip in 346, Dem. XIX, 158, took only about seventy days, three months, if we accept Demosthenes at his face value.

² (Xen.) *Ath. Pol.* III, 5.

³ Meritt, *A.J.A.*, 1925, pp. 292-298.

⁴ Thuc. II, 80, 95.

⁵ Thuc. II, 70.

wise, the date made possible for *I.G. I²*, 216, spring of 429, accords with our knowledge of Athenian successes Thraceward. Athens had not then been forced to evacuate Bottice as a result of the defeat of Spartolus.¹ Pleume and Aioleion could now pay their tribute at the Dionysiac festival of 429.

Thus unless we wish to assume that there were three assessments in four years, 428, 427, or 426, and 425, in direct contradiction to the Old Oligarch who probably wrote in 425, we must date the assessment in 430, the Methone decree in the early months of 429, and *I.G. I²* 216 in the spring of 429. From this it follows with much probability that *I.G. I²*, 218 is the quota list of 426–5, the first of the next assessment period. Although it may be urged against this date that we now have two assessments in successive years, this is in reality no objection, for the Old Oligarch was in no position to prophesy, when he wrote in 426–5,² that Cleon would radically change the system of quadrennial assessments and double the tribute within a year after he wrote. He was merely describing the practice of the past thirty years. In that period, if we are right, there had been but two exceptions to the rule as he puts it. One period lasted three years, 446–444. The next period lasted five, 443–439, thereby bringing back the regular scheme.³ Moreover, the Old Oligarch qualifies his statement about quadrennial assessments in such a way as to admit of this slight variation.⁴

Another consequence of our date for the Methone decree leads to the problem of Methone's entry into the empire, for Methone at that time was in arrears. In other words, Methone had been made tributary before the assessment of 430. Aside from this precise bit of information we know nothing about Methone's history before 429. Our information for the Thracian region of the Athenian Empire is unusually complete for the years 436–5 to 432–1, for we have two complete quota lists for this period, one almost complete, and two more nearly half preserved. In none of these does Methone appear.⁵ Consequently, it is almost certain that Methone was not a member of the Empire before the Peloponnesian War.

¹ Just when these towns were regained we cannot say. They are absent from the quota list of 432–1, *I.G. I²*, 213. Although Phormio captured several small towns in 432, Thuc. I, 65, the quota list of the following spring gives no indication of such successes. Possibly the Chalcidian campaign of Hagnos, Thuc. II, 58, was responsible for the gains in Bottice territory. The battle of Spartolus, 429, Thuc. II, 79, was undoubtedly followed by evacuation of Bottice.

² Since the treatise was evidently written before the affair at Pylos which began in the year 426–5, it is safe to say that the author knew nothing of the assessment of 425–4 when he wrote.

³ Meritt, *A.J.A.*, 1925, pp. 247–273, 292–298.

⁴ (Xen.) *Ath. Pol.* III, 5: τοῦτο δὲ γίγνεται διὰ τολλὰ δι' ξένων πάμποτεν.

⁵ *I.G. I²*, 210 and 213 give complete Thracian lists. *I.G. I²*, 209 and 211 are about half complete, and *I.G. I²*, 212 as given in the Corpus, has the Thracian panel without gaps. Nevertheless, there is some reason for thinking that there is a break of several lines at the top of the Thracian list.

We must conclude that Methone's admission came during the first two years of the fighting in the north, either in 432 when Athens was on the offensive against Perdiccas, or in 431 when Perdiccas came to terms with Athens. In 432 Therme was taken by Athens¹ and later in the summer an expedition was sent under Eucrates to keep Perdiccas from helping his allies in the Chalcidic peninsula.² Methone may have been taken then as a base of operations against Macedon on the western coast of the Thermaic Gulf. But Methone paid no quota in 431. Possibly she was in arrears for two payments.

In 431 Athens surrendered Therme to Perdiccas in return for his promise of assistance.³ It is to this year, I think, that we must assign Methone's formal annexation, even though it may have been taken during the preceding campaign; and since Methone was either Macedonian or threatened by Macedon, we may assume that Athens asked and received guarantees with respect to Methone when she surrendered Therme. From the Methone decree itself we may infer some sort of agreement between Perdiccas and Athens about the city or at least a *modus vivendi*.

Thus Athens did nothing more than surrender territory at the head of the Thermaic Gulf in return for the extension of territory on the western shore where Aison and possibly the Eretrian Dicaea were situated. Both of these towns, like Methone, were granted exemption of tribute, except for the quota to the Goddess, as *I.G.*², 216 indicates.

In conclusion, our study of the Methone decree has shown that there was an assessment in 430, that *I.G.* I², 216 is the quota list of 430-29, and that Thucydides and these inscriptions are mutually corroborative.⁴

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¹ Thuc. I, 61. In *I.G.* I², 208, a solitary *theta* in the third letter space has been responsible for the tentative restoration of Methone's name in that place, but there was a question in Kirchhoff's mind as to the reading. *I.G.* I², 208 was then dated during the first years of the war, when it was known from *I.G.* I², 216 and the Methone decree that Methone was in the empire. Now that we know *I.G.* I², 208 is a part of the quota list of 438-7, the restoration loses whatever of plausibility it possessed. For the date of *I.G.* I², 208, see West, *A.J.A.*, 1925, pp. 185 ff.

² West, *Class. Phil.* X, pp. 44 ff.

³ Thuc. II, 29.

⁴ Incidentally, since *I.G.* I², 216 records the payment of tribute by Thera, we must date its admission to the empire before the spring of 429. This opens for discussion the date of *I.G.* I², 65, dated usually in 425-4 because of a mention of Thera. Cf. West and Meritt, *A.J.A.*, 1925, pp. 434-439.

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A RESTORATION IN *I.G. I²*, 213

IN *I.G. I²*, 213, Col. II, lines 61–63 (as in the Corpus) appears the prescript of the special category: πόλ[es αὐται] φόρον ταχ[σάμεναι]. This same category appears in *I.G. I²*, 211 and 212, and on the analogy of these two inscriptions the Corpus has rightly restored in *I.G. I²*, 213 the name [Σαρταῖοι] after the numeral ΔΔΓ of line 64, and the name [Αμόργιοι] after the numeral Η of line 66. The restored transcript in the Corpus reads as follows:

	Πόλ[es αὐται]
	φόρον
	ταχ[σάμεναι]
65	ΔΔΓ [Σαρταῖοι]
	ΔΓΗΙΙΙΙ — — — —
	Η [Αμόργιοι]
	ΔΓΗ[Ι]ΙΙΙΙ — — — —
	ΔΓΗ[Ι]ΙΙΙΙ — — — —

It is, I think, possible to restore also the missing names of lines 65, 67, and 68. It has been shown recently that the panel of names under the heading ταῖσδε πόλεσιν οἱ ἰδιῶται ἔταχσαν in *I.G. I²*, 216 is exactly the same as the panel of names under πόλεις ἃς οἱ ἰδιῶται ἐνέγραψαν φόρον φέρειν in *I.G. I²*, 211, except that the names of those cities which participated in the revolt of Bottice and Chalcidice do not appear in *I.G. I²*, 216.¹ Now, *I.G. I²*, 213 is from the first year of the revolt (432/1) and the same comparison may be made between the categories of πόλεις αὐται φόρον ταχσάμεναι in *I.G. I²*, 213 and in *I.G. I²*, 211, and 212.

There are five cities listed in *I.G. I²*, 211 and 212 with tithes of ΔΓΗΙΙΙΙ : Κάσιοι, Καλλιπολῖται, Ἐτεοκαρπάθιοι, Χεδρώλιοι, and Πλευρῆς. Of these five cities the Κάσιοι, Ἐτεοκαρπάθιοι, and Καλλιπολῖται are known to have been outside the area of the revolt of Bottice and Chalcidice, and these names should be restored in *I.G. I²*, 213.²

The following restoration may be suggested:

ΔΔΓ	[Σαρταῖοι]
ΔΓΗΙΙΙΙ	[Κάσιοι]
Η	[Αμόργιοι]
ΔΓΗ[Ι]ΙΙΙΙ	[Καλλιπολῖται]
ΔΓΗ[Ι]ΙΙΙΙ	[Ἐτεοκαρπάθιοι]

A comparison of this list with *I.G. I²*, 211 and 212 shows that of those cities which had been listed under the category of πόλεις

¹ West and Meritt, The Athenian Quota List, *I.G. I²*, 216, *A.J.A.*, XXIX, pp. 434–439.

² This suggestion has been adopted in the Corpus. Cf. *addenda et corrigenda*, p. 303, *editio minor*, Vol. I.

αὐταὶ φόρον ταχσάμεναι the participants in the revolt of Bottice and Chalcidice were Αἰολῖται, Γαλαῖοι, Μιλκώριοι, Φαρβήλιοι, Χεδρώλιοι, and Πλευμῆς.

Knowledge of the Αἰολῖται, other than that furnished by the tribute lists, comes from fragment 156 of Theopompus. He is quoted in Stephanus of Byzantium as follows: Αἰόλειον, τῆς Θράκης χερρονήσου πόλις. Θεόπομπος ἐν Φιλιππικοῖς εἰκοστῇ τρίτῃ ἐπορεύθη εἰς πόλιν Αἰόλειον τῆς Ἀττικῆς μὲν οὖν πολιτευομένην δὲ μετὰ τῶν Χαλκιδέων. The word 'Αττικῆς has been corrected to Βοττικῆς by Meineke. The Αἰολῖται, therefore, were a Bottic people.

Gale was on the west coast of Sithonia, a short distance north of Torone.¹

Μιλκώρος occurs in Stephanus of Byzantium also as Μιάκωρος. Fragment 174 of Theopompus, preserved by Stephanus, reads: Μιλκώρος, Χαλκιδικὴ πόλις ἐν Θράκῃ, etc., or Μιάκωρος, πόλις Χαλκιδικῆ. The town, therefore, belonged to Chalcidice, but its exact location is uncertain.² Leake assigns it merely to the interior of Chalcidice.³ Kirchhoff (see map at the end of Vol. I of the old Corpus) is obviously wrong in placing Gale and Milcorus in that part of Thrace north of Samothrace. Kirchhoff's view was followed by Busolt, who restores, quite correctly, ΔΙΤΗΤΙΙ [Γαλαῖοι ἄτακτοι] in *I.G. I², 210* on the analogy of Μιλτώριοι ἄτακτοι[*i*] in the same inscription, thinking that Gale and Milcorus were close together, as indeed they were.⁴ But both towns were situated in the Macedonian peninsula in the area of the revolt of Bottice and Chalcidice. This fact is further established by the absence of these two names from *I.G. I², 213*.

Pharbelus (*I.G. I², 202, 203, 204, 209, 210*), Chedrolus (*I.G. I², 210*) and Pleume (*I.G. I², 64*, line 125) are known to have been in the Thracian district. Pharbelus, with its tithe of ΓΗΤΗΤΙΙ, certainly did not appear in *I.G. I², 213*. Chedrolus and Pleume are both recorded with tithes of ΔΓΗΤΙΙ in *I.G. I², 211* and 212, but of the five names recorded with this tithe under the prescript πόλεις αὐταὶ (φόρον) ταχσάμεναι of *I.G. I², 211* and 212, the restoration of Κάσιοι, Καλλιπολῖται, and Ἐγεοκαρπάθιοι in *I.G. I², 213* makes it seem probable that Chedrolus and Pleume were in the area of the revolt of Bottice and Chalcidice, and their absence from *I.G. I², 213* may be explained in that way.

It is known that Athens made herself mistress of the coast of Chalcidice again soon after the revolt.⁵ The appearance of Π[λευμῆς]

¹ Meritt, A Restoration in *I.G. I*, 37, *A.J.A.* XXIX, p. 27.

² Dimitzas, *Τοπογραφία τῆς Μακεδονίας*, p. 371.

³ Leake, *Travels in Northern Greece*, Vol. III, p. 456.

⁴ Busolt, Der Phoros der Athenischen Bündner, *Philologus*, XLI, p. 665.

⁵ Meritt, A Restoration in *I.G. I*, 37, *A.J.A.*, XXIX, pp. 26-28.

and Α[ι]ο[λῆτα]· in *I.G. I²*, 216, under the prescript πόλεις αὐται
(φέρον) ταχσάμεναι still further establishes that fact, and shows, at
the same time, that these two cities were among those recaptured.¹

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¹ West and Meritt, The Athenian Quota List, *I.G. I²*, 216, *A.J.A.*, XXIX,
pp. 434–439.

BOOK REVIEWS

THE ROMAN TOGA, by *Lillian M. Wilson*, 132 pp., 102 Illustrations. The Johns Hopkins Press, Baltimore, 1924. \$5.00.

The Romans were proud of themselves as the race that wore the toga. Cincinnatus, plowing behind his oxen on his little farm, sent to the house for his toga, which he draped round himself over his tunie, before he could listen to the deputies of the Senate proffer their nomination of him as dictator to save the state.

The impression is widespread that a toga is something like a bed sheet. Perhaps that idea has gained ground with the increasing production of Greek and Roman plays and their pictorial representations in papers and magazines. The use of a glorified or enlarged bed sheet has been all too common. The toga is rather a blanket, and if the reserves accumulated on the sideline benches of the college gridirons wore instead of their distinctive blankets ones of white or gray or brown with an occasional purplish or magenta stripe, they would look more like Romans than anyone else at the present time, except the blanket-clad American Indians at a ceremonial. Primitive peoples in general wore as an outer garment a blanket of some sort. A rectangular cloth was the simplest shape to weave, and a blanket thus made obviously could serve many purposes.

The Roman toga grew from a personal covering into a national bulwark. Its simplicity always remained, although fashion through a thousand years dictated many a changing nicety of fold and many an intricacy of drape. It would seem that there should be no difficulties in describing a Roman toga. But when one looks through Roman literature, as Dr. Wilson has done, all that is said turns out to be practically valueless so far as concerns exact measurements and cut, methods of making and technique of draping. As the author says, the literary reference to the Roman toga is casual. But the hundreds of Roman statues scattered in the museums of the world wear togas for the most part, and on many a well preserved piece of bas-relief, toga-clad figures stalk or stand in Roman *dignitas*. Here would seem to be ascertainable facts from figures.

The book here under review is the first of the Johns Hopkins University Studies in Archaeology, under the editorship of Professor David M. Robinson. Miss Wilson has studied the statues in every museum that has togated statues of appreciable worth and number. The 102 illustrations in a book of 132 pages speak for themselves.

The author, on pages 22 and 23, states her methods of approach to the subject of the Roman Toga on its technical side and the reasons behind her methods. She has not relied upon photographs; she has gone to hundreds of the togated statues themselves and measured and examined them. Then she has draped living models with togas of differing sizes and cut, until the togas of her models reproduced the characteristic lines of the sculptured garment. Probably no one would have disputed an *a priori* dogmatic statement that "neither the sculptors nor the painters of antiquity were producing fashion plates," but Miss Wilson has examined so carefully the mimetic exactness of the inevitable or characteristic lines, that she has also been able to distinguish the accidental and arbitrary folds of casual lines on the living model from the idealized or artistic lines on the garments of the marbled ancients. Her statement on page 25 cannot be controverted: "If a piece of drapery be placed on a human figure in the same manner as that shown on a sculptured figure, and it produces in all its parts the essential lines and folds shown on the statue, then the drapery must have practically the same size and shape as that which the sculptor used on his model."

The Roman toga is a piece of material with a longer and a shorter straight edge on the sides. The longer edge hangs over the left shoulder straight down the body in front. This upper or longer edge then comes across the back under the

right arm-pit, across the breast, and then again over the left shoulder and down the back. The garment curves from each end of the short straight edge to a varying point on the edge of the cloth at its greatest length. The many forms of the Roman toga through the centuries of its use all depend on modifications in length and width of the cloth and the variation of curve in the cloth as it met the ends of longer or shorter straight edges on the sides.

Miss Wilson begins with the simple drapery on the bronze statue at Florence of the third century B.C., known as the Arringatore. Here she establishes by trial her unit of measurement, which is the height of her model from the floor to the base of the neck in front. This unit of measurement bears a pretty regular proportion to the added measurement of the girth of a statue or model.

From the toga of the Arringatore the author goes to the larger toga of the Republican period and superposes the one on the other in a flat drawing to scale. This same method she applies to the toga of the ages she has chosen as representative.

The toga of the *Ara Pacis* of Augustus offers good examples for her third form of the toga, and the author shows that the change is in the easing or lengthening of the toga's upper edge, allowing a fullness of drapery in front which certainly makes the *sinus* so often mentioned in literature. Also for the first time on several figures in this *Ara Pacis* relief appears a small loop or boss near the waist line in front, which is believed to be the *umbo* of literature.

Miss Wilson devotes a chapter (III) to the Imperial Toga, where among other things it is shown that the large imperial toga at all events was woven in two pieces and seamed. The author closes her book with a brief appendix of "The Toga for Today", which gives practical suggestions based on her own experience for the use of interested students and teachers on Fabric, Color (the Roman *purpura* seems to approximate garnet or dark magenta), Making the Toga, and Draping. There are also eleven tables of dimensions which follow her diagrams.

The reviewer inclines to believe that Miss Wilson has made it unnecessary for anyone else to study the shape of the Roman toga and the way it was draped. She has gathered her literary data fully, she has studied the existing monuments carefully, and has applied to the study of the drapery the only sensible method there is. Her study looks like what is called a definitive piece of work.

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ROMAN BUILDINGS OF THE REPUBLIC, by *Tenny Frank*. 145 pp., 15 figs. Vol. III of Papers and Monographs of the American Academy in Rome, 1924.

Dr. Frank has written a book which is both brilliant and sound, on the dating of Roman buildings of the Republic from their materials.

The work is virtually a pioneer work in English and will, unless I greatly err, long be the *finis a qua* for future workers in this field. The author modestly calls his monograph a preliminary investigation and calls attention to the larger work on building materials of Rome that has been projected by the Carnegie Institution of Washington.

Why make a study of building materials in order to date certain monuments of undetermined age in Rome? Because just this criterion may furnish the clue to a sure chronology that can with certainty be provided neither by a study of style and technique alone, nor by a study of builders' devices and tricks, nor by a study of the measure of blocks. Indeed the latter practice may rest upon a wholly false assumption that the Romans used the Oscan foot, first. But as we add to these other criteria a minute study of the various kinds of tufa, determine

the quarry from which each kind comes, and discover as nearly as possible the age of these quarries, we may provide a surer foundation for historical accuracy.

The first chapter on Roman Tufas and Their Provenance is the best I have ever read on the subject. The literature on this subject is considerable. There are many treacherous pitfalls and the romantic study of geology and chemistry challenges the expert at every turn. It is interesting to note that Dr. Frank has made a collection of fifty specimens of tufas taken from Roman quarries and buildings, which have been placed in the Museum of the American Academy in Rome.

The following chapters discuss a great many buildings. The test of determining their dates and of basing a chronology upon kinds of stones used in existing remains is carried out with quite extraordinary skill. The great difficulties involved will be apparent to anyone reading, e.g., the chapters on the Tullianum, the Vicinity of the Casa Romuli, or the Servian Wall. Nor will the reader find the arguments easy to follow in every case. Let us remember that the fragments of the old Apollo temple have been variously dated from the fifth to the second century B.C.; that the Tullianum has been assigned to the regal period, even to Mycenaean times, although Dr. Frank rightly places it in the third century B.C.; that the stele-inscription is here assigned to the sixth century, though it is generally placed in the fifth century B.C. Dr. Frank is convinced of the truth of the Roman tradition of a sixth century Palatine wall.

I have said enough to indicate the character of this book and my opinion of it. Though many points may be open to dispute, I should hail this work as bestowing highest credit upon American scholarship.

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GREEK VASE PAINTINGS. PEINTURES DE VASES GREQUES, by G. von Luecken, 16 pp. and 120 plates in collotype, large 4to. M. Nijhoff, The Hague, 1923. 100 guilders.

This collection of excellent plates made by a new method of reproduction does not attempt to rival the publication now being done under the auspices of the Union Internationale Académique. The 120 plates selected by von Luecken give for the most part unpublished vases from the collections in Berlin and Vienna. There are 71 plates from vases in Berlin, 44 from Vienna, 3 from Munich, and 1 each from Corneto and the Athens Museum.

These 120 plates are made by the new photometric process. The distorted foreshortenings that orthophotography gives because of the rounded surface of vases is almost entirely eliminated. This new process, too, being photographic, gives a certain feeling of confidence which tends to outweigh even the wonderful reproduction of Reichhold.

The 16 pages of text give a good but sketchy development of the technique of vase painting as illustrated by reference to certain of the plates.

It is to be hoped that von Luecken will be able to complete his plan and issue the vase pictures in German residences and university towns of which he knows so well the provenience.

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HANDBUCH DER KUNSTGESCHICHTE von Anton Springer. II, FRÜHCHRISTLICHE KUNST UND MITTELALTER. Zwölft, umgearbeitete Auflage bearbeitet von Joseph Neuwirth, pp. IX, 547, mit 719 Abbildungen im Text, 12 Farbendrucktafeln und 4 Tafeln in Lichtdruck, 1924. III, DIE KUNST DER RENAISSANCE IN ITALIEN. Zwölft, verbesserte und erweiterte Auflage bearbeitet von Georg Gronau, pp. XIV, 394, mit 362 Abbildungen im Text, 16 Farbendrucktafeln und 8 Tafeln in Lichtdruck, 1924. IV, DIE KUNST DER RENAISSANCE IM NORDEN, BAROCK UND ROKOKO. Elfte, verbesserte und erweiterte Auflage bearbeitet von Paul Schubring, pp. X, 405, mit 597 Abbildungen im Text, 19 Farbendrucktafeln und 8 Tafeln in Lichtdruck, 1923. Alfred Kröner Verlag, Leipzig. Each volume in cloth, 18 Marks, or \$4.80.

Since the appearance in 1923 of the twelfth edition of Vol. I, *Das Altertum*, revised for the fourth time by Professor Paul Wolters of Munich (see writer's review, *A. J. P.*, XLV, I, 89-92), the above editions of Vols. II-IV of this justly famous *History of Art* have been published, and deserve the attention of American scholars and lovers of art.

The twelfth edition of Vol. II, as of the preceding seven, is the work of the veteran historian of art, Dr. Neuwirth, formerly Professor of the History of Art at the German University of Prague (1897-99), and since at the *Technische Hochschule* in Vienna, a scholar long known for his contributions, especially to the history of the art of Bohemia. The eleventh edition had been expanded by new material, especially the sections on Oriental Christian Art, and by adding an account of the art of Bulgaria and Russia to those on Byzantine Art. His last edition has kept pace with the latest results of art criticism, its contents being rearranged, many new text-cuts and four new plates being added, as well as a seven-page bibliography of essential works for further study. The contents are divided into three main parts, the first two relatively short: Early Christian Art (61 pp.), including an account of the early basilicas of Asia and Africa and their origin, art works in Rome, including paintings from basilicas and catacombs, mosaics, statues, and sarcophagus reliefs, and the monuments of Ravenna; Separation of Oriental and Western Art (75 pp.), treating of the Byzantine, Mohammedan, and Carolingian periods; and a larger section on the Development of National Styles, subdivided into (a) Architecture, Painting, Sculpture, and Industrial Art from the tenth to the thirteenth century (158 pp.), and (b) Gothic Art of the Middle Ages (228 pp.).

Vol. III has been prepared by the Director of the Cassel Gallery, who is well known for his many monographs on Italian artists. At the death of Adolph Philippi of Dresden in 1918, the editor of several preceding editions and a scholar known especially for his *Der Begriff der Renaissance*, 1912, Dr. Gronau completed the eleventh edition, 1920, altering the text by the addition of new matter and the revaluation of epochs, schools, and individual artists. Thus, he gave greater weight than Philippi had to certain sections, notably to the Sienese School of the Quattrocento, and to certain artists, e.g., to the greatest of the *Wanderkünstler*, Piero della Francesca, whom he regarded as the greatest Italian painter south of Florence in the fifteenth century, a figure parallel to Jacopo della Quercia in sculpture. Unfortunately, owing to post-war conditions in Germany, he was unable to incorporate in that edition art criticisms appearing in foreign journals, and to add new illustrative matter to the text. These shortcomings have been overcome in the present revision, which shows an amplified text, many additional cuts, some from recent photographs to replace older ones, and others to illustrate the works of less known artists, eight new full-page plates, and, as a new feature, a bibliography. The work falls into four divisions: the first (40 pp.) deals with the masters of the thirteenth and fourteenth centuries, notably Niccolo of Pisa, Cimabue, and Giotto; the second (156 pp.) with the Early Renaissance, including

the great names in architecture, sculpture, and painting of the fifteenth century; the third (178 pp.) those of the great Cinquecento, with an account of the decline and end of the Renaissance; and lastly in a twelve-page summary with the artistic handicrafts, church ornamental objects, utensils, furniture, and objects in metal, wood, majolica, and glass.

Vol. IV has been brought to date by Professor Schubring of the *Technische Hochschule* in Hannover, the author of an extended list of books on Italian art and artists, and of a well-known *Cicerone* for the galleries of Florence, Milan, and Berlin. Much new material had been added to the two preceding editions, especially to the sections on the fifteenth to the sixteenth century, the tenth appearing in 1920 along with the eleventh edition of Vol. III. This last revision is still richer in illustrations and in the amplification of the text, notably in the sections devoted to German art, especially Baroque. Like Vol. II, Vol. IV is divided into three parts: the Renaissance in the North (74 pp.), the Renaissance outside Italy in the sixteenth century (136 pp.), and Baroque and Rococo in Italy, Spain, France, Netherlands, Germany, and England (180 pp.).

The illustrations in all these volumes, both in their selection and execution, are uniformly excellent, especially the full-page plates in color and phototype. One has only to glance at the Frontispiece of Vol. II (Interior of St. Sofia) to gauge the high standard of the former, and at Pl. IX of the same volume (Rheims Cathedral) to see the fine execution of the latter. The 1678 text-cuts are equally fine, and appear on almost every page in close proximity to the descriptive text. In fact the illustrations are the distinctive feature of the entire work, making the reading of the text a constant delight. Their great number can be understood when one remembers the origin of the Handbook—in merely a collection of illustrations with accompanying descriptions. The bibliographies, ranging from three to eight pages in length, are fairly full, and include books in many languages arranged to fit the corresponding sections of text. Their up-to-date character is shown by the fact that of the 215 works cited in the shortest, appended to Vol. IV, no less than nineteen have appeared between 1918–23. The full indexes are uniformly arranged in all four volumes, the names of places and artists appearing under one alphabet, the former easily distinguished from the latter by bold-faced type.

From many points of view Anton Springer's Handbook in its new dress is still the most authoritative and attractive account of the History of Art in popular form. The various revisers have again carried out the spirit of Professor Springer, and have once more laid the art-loving public of two continents under deep obligation.

A new edition of Vol. V, *Das Neunzehnte Jahrhundert*, has also appeared, but a copy has not yet reached me.

WALTER WOODBURN HYDE

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JACOPO DE BARBARI, by André de Hevesy. pp. 52, 39 pls. G. Van Oest, Paris and Brussels. 1925.

The Master of the Caduceus, long known to students of early engraving, has only recently become a tangible figure as a painter. M. de Hevesy follows up important studies on the drawings of Jacopo, in the *Burlington Magazine*, with a concise monograph on the artist in all his activities. The publisher provides a characteristically fine book in quarto with thirty-nine collotype plates gathered at the end, comprising, with all the known paintings and drawings, a selection of the engravings. M. de Hevesy's study is a paragon of Gallic lucidity and elegance. It carries lightly a complete documentation; while within the strait limits of a

biographical sketch and *catalogue raisonné*, it suggests vividly the bizarre and intriguing personality that was Jacopo's. The artist indeed is of the disequilibrated type of a Piero di Cosimo or Amico Aspertini, an exotic in his native Venice. He apparently suffered, like other transitional painters from a certain half-heartedness, irony and dispersion of aims, through accepting the classical forms of the renaissance without understanding them or even believing in them; and, being a little master, he may have been further impaired by having to play the too heavy rôle of apostle of Italian culture in Germany and Flanders. So much for a problem too delicate for a review and too interesting to let alone. In so complete a work as this a fuller registration and discussion of the more serious attributions to Jacopo would have been fitting.

FRANK J. MATHER, JR.

Princeton University

HISTOIRE DE LA GRAVURE DANS LES ANCIENS PAYS-BAS ET DANS LES PROVINCES BELGES, DEPUIS LES ORIGINES JUSQU'À LA FIN DU XVIII^E SIÈCLE. [Par] A. J. J. Delen. Première partie: Des origines à 1500. With 130 reproductions in heliogravure. Bruxelles: G. Van Oest, 1924. Price per volume, unbound, 150 francs.

LA GRAVURE EN FRANCE AU XVIII^E SIÈCLE. LA GRAVURE DE GENRE ET DES MEURS. Par Émile Dacier. 140 pp., with 133 reproductions in heliogravure. Paris et Bruxelles: G. Van Oest, 1925. 150 francs.

The literature of prints is increasing rapidly. Sumptuous volumes of plates and modest handbooks, scholarly studies and popular guides, general works and studies of special countries or subjects of individual artists are coming from the presses in a steady procession. Smaller talents, not before separately treated, are dug from oblivion and presented in monographs. Topics are reconsidered with fresh zest, and old battles of experts are reopened.

In this productiveness, books on graphic art in the Netherlands are taking their place as part of a publishing movement in Belgium tending to fix in print the artistic glories of the Lowlands. Delen's book, perhaps even more than the one by M. J. Schretlen on Dutch and Flemish woodcuts (London, 1925), represents in part a rehabilitation, a restoring to the Netherlands, of prints formerly claimed as of German or French origin. The author makes his point a bit in the spirit of "stop thief," speaking of "narrow chauvinism" and "cynical spoliation." However, a number of his attributions were long since conceded by noted German and other authorities. Delen himself is not averse to entering the realm of suppositions that lures the expert of racial proclivities, but he also accentuates the frequent difficulty in definitely localizing or dating an old print. For the rest, his treatise is not only well documented, but is based also on much comparison of prints, and the very enthusiasm of his patriotism animates the recital of facts. Moreover, other arts of the Lowlands—painting, tapestry, goldsmithing, etc.—are cited in evidence. In fact, this interrelation of the arts is a very necessary factor in the study of old prints. As one looks over the good collotype plates, and the comments, these engravings emerge from the possible first impression of a uniform primitiveness into a varied technical and personal expression. That is so, even if you make allowance for an expert's enthusiasm for his specialty.

Dacier's book on a country and period already much and often written about, deals with its subject from the standpoint of social history. From that point of view, in fact, no treatment of this subject can get away very far, for this epoch in French prints so obviously mirrors its time, with its aims and tastes in art and in life. "None is more brilliant or more complete," says our author. Even in the

sub-specialty of *genre* art there is much diversity in subject and treatment. The sober yet sprightly pictures of bourgeois life by Chardin come down to us beside the ubiquitous *estampe galante* of Boucher and others, or the "slyly libertine" moralizing of Greuze. The possibilities of process were fully and widely exploited by the engravers,—line engraving, etching, stipple, aquatint, the "chalk manner," color work, and what not. All this product, much of it rare and precious to-day, was in its time sold cheaply (M. Dacier lists prices), "forming part of the usual decoration of life." From this standpoint of a buying contemporary public, the prints describing the manners and dress of that public are of particular significance. In them are reflected the gallant adventure, the sentimental pose of the time, as well as the sober intimacies of the life of the plain man. The well selected collotype plates are adequate reproductions, although for the student of prints they are not absolute facsimiles such as those in Lippmann's folios, nor even those in Courboin's *Histoire de la gravure française*, now in course of publication. That is partly due to reduction in size. The book is introduced by a lively presentation of carefully collected facts; one might well like to see the index to this which the author pronounces unnecessary. The rest of the volume is given over to descriptions of the plates, biographical notes on the engravers, and an index of painters whose works are reproduced.

The strong contrasts in expression of time and race offered by these two books make clear again the wide and varied interest inherent in prints.

FRANK WEITENKAMPF

New York Public Library

THE PARTHENON: ITS SCIENCE OF FORMS, by Robert W. Gardner, pp. 21, 11 plates. New York University Press, New York, 1925. \$15.00.

Two years ago the reviewer surveyed the numerous mystic systems of proportion which have been applied to the Parthenon (*Architecture*, 1923, XLVII, pp. 177-180). Since that date the list of such books, already long, has been increased by two; "The Parthenon" of Mr. Hambidge has been surpassed by "The Parthenon" of Mr. Gardner, both in beauty of typography and in astounding complexity of illustration. Mr. Gardner's system purports to fit not only the Parthenon, but also—a merit which has been claimed for no earlier theory,—the entire Greek world! The centre of the natural world was marked by the omphalos at Delphi; but the centre of the world as planned geometrically by the Greek architects was exactly at the middle of the Parthenon. "It would seem," says the prospectus of the volume, "that the temple at Athens is but the central symbol of the Hellenic philosophy."

Thus we are told that the centre of the Parthenon was so located that its longitudinal and transverse axes, as well as "geodetic base lines" which were really the diagonals of "root-five rectangles" centred on the axes of the Parthenon, might be clearly indicated by natural or artificial "markers." By this means, "should every mark be effaced from the Acropolis, all could be restored by means of the distant markers and base lines on the sea and on the land, and with the key furnished by the law and the terms of the series." These "markers" include anything that the lines in question may happen to cross, mountain peaks or islands, distant cities or neighboring angles of city walls, pedestals above ground or a *Felsgrab* below, fortuous remnants of ancient walls or even modern constructions,—the date makes no difference. One "geodetic base line" carried to the southeast sibilantly severs Sunium, Seriphos, Siphnos, Sammonium (Crete), and the Serapeum at Alexandria (Egypt)! It is regarded as particularly significant when the distance of any of these objects from the centre of the Parthenon happens to be the multiple of a Greek stadium length which, as will be shown below, no Greek even employed.

As for the design of the Parthenon itself, we are told that it was based on a "master square" of which the side was equivalent to the Attic foot, increased, for good measure, by a sixty-fourth of its length. Then, by the occult process of doubling its area four times, there resulted a square of sixteen times the previous area, a size appropriate for a metope. This metope, carved with a relief of Pegasus, was used as the key-note of the temple and was placed just to the left of the central triglyph on the east façade (all the other metopes being reduced in width to subordinate them). We are informed that the architect next derived from the width of the Pegasus metope, by the law of extreme and mean ratio, the axial spacing of the triglyphs; and that this, doubled, yielded the axial spacing of the columns and the height of the entablature (including the nose of the roof tile and the column capital). This latter square, furthermore, when treated as the third term in a system of squares of pentamerous increase (so that the unit square *A* has one twenty-fifth of its area), yields successive squares of which the areas progress inexact multiples of five; and these squares are stated to give the most important dimensions of the temple, both in plan and elevation. But the reviewer's doubts with regard to such a method of designing a temple are increased by the discovery of such discrepancies as 0.25 inch in the application of square *B*, 0.60 inch and 2.25 inches in *C*, 7.45 inches in *D*, 2.12 and 2.18 inches in *E*, and 5.25 inches in *F*.

The Parthenon, however, was merely the nucleus of a tremendous conception: "The whole plan of rebuilding the city, the walls, the temples, the Acropolis, the Parthenon, and the Piraeus, was conceived as a unit and so ultimately carried out." "From the structure of the Parthenon, the series broadens out to the enclosure of the Acropolis." "From the Acropolis, the geometric series extends out through the walled city." And thence the growth is extended to the confines of the Hellenic world. Two pentamerous series of squares are used, one (*A*, *B*, *C*, etc.) being that employed in the design of the Parthenon itself, while the other (*A'*, *B'*, *C'*, etc.) was established by inscribing within each of the squares of the previous series a "root-five rectangle," of which the diagonal in each case was revolved to give the width of a new square which is stated to be "commensurable with the Attic foot and with the stadium." The perimeters of these two series of squares, and the maze of 45-degree diagonals and inscribed circles within them, as well as supposed remnants of older systems following other orientations, provide a network which necessarily intersects most of the known monuments of Athens (and elsewhere). Again it is immaterial whether they are natural features such as harbor entrances and islands and mountain peaks, or monuments early and late. Are we to assume that a copy of the plan was filed in the Prytaneum in order that all subsequent structures, underground cisterns or scattered blocks of stone, choragic columns and the Tower of the Winds, the stadium and a corner of the Olympieum precinct, or even the city of Alexandria in Egypt (on the 10,000 stadia square), might be properly located?

It would appear that skepticism as to such theories of art were not unexpected by the author; for he terminates with the statement that, "whatever the conclusions are as they may affect the realm of art, in the realm of science it will be seen that the theorem . . . (i.e., the dimensions of the Parthenon may be mechanically determined by reference to three related series of squares) . . . has been demonstrated." But even in the realm of science, the very fact that the author is able to

multiply $1\frac{1}{4}$ Attic feet (a side of his master square) by $4 \times 1.6180 \times 2 \times \sqrt{5} \times \frac{\sqrt{6}}{\sqrt{5}}$,

and yet to obtain as a product exactly 32 Attic feet (his square *D'*), arouses doubt; the reviewer obtains rather 32.202 Attic feet. And the error rapidly increases, amounting to 282 Attic feet, for instance, in square *M'*, or to 35,250 Attic feet in square *S'*. In other words, the final series of squares is incorrect; they are in no way related to the series from which it is assumed to have been generated; the author's

mathematical evolution is vitiated by the fact that, when the entire book is reduced to a single equation, $A' = \frac{g}{2} \times \frac{1}{2} g Z^2 (1 + \sqrt{5})^2$, — wherein A' is the unit square of the final series and Z is the width of the original master square, 1 $\frac{1}{4}$ Attic feet, — we find that the area A' should be 8.296 rather than 8.192 square Attic feet. This initial error, which causes such vast discrepancies, amounts to $\frac{1}{12}$ inch in the width of an ordinary card table. In this final series, furthermore, alternate squares are measured in Attic stadia of $2 \times 5 \times 5 \times 5 \times \sqrt{5} = 559.02$ Attic feet; but the Attic stadium really contained 600 Attic feet! It is evident that the author, while adopting the reviewer's statement that the Attic foot had a length of about 327 millimetres, neglected to make a corresponding revision of his stadium length; instead he seems to have accepted the estimate of about 185 metres given by antiquated books (as the equivalent of 600 false Attic feet of $308\frac{1}{4}$ millimetres), adjusting it to the true Attic foot according to the principles of "dynamic symmetry." The actual size of square M' , for instance, is 75.007 stadia rather than 80 stadia; not only are the "forty stadia markers," for which Mr. Gardner would have us search on the island of Stalida and the "Mountain of Pausanius," geometrically mislocated by 141 Attic feet; but true "forty stadia markers" would have to be sought 1639 Attic feet, or about 1758 English feet, farther out, in one case in the sea. Alexandria, really 586 miles from Athens, is located by the author at a distance of 625 miles (or, correcting the geometrical error, 629 miles), and so on the edge of a desert plateau forty miles inland; while if it were really on the perimeter of a 10,000 stadia square it would be 668 miles from Athens, in the desert barely northwest of the Great Pyramids of Gizeh. Such errors, which occur in all the squares of the last series, invalidate the entire "scientific, geodetic system of measurements, national in its scope, philosophical in its conception, and broad enough to include the whole Hellenic world of the day." Before issuing a book which is claimed to "indicate to the archaeologist where to search for yet undiscovered remains," the New York University Press should at least have made reasonably certain that the mathematical processes were not as novel as the artistic theories.

WILLIAM BELL DINSMOOR

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THE VANISHED CITIES OF ARABIA, by *Mrs. Stewart Erskine*. Illustrated by *Major Benton Fletcher*, pp. 324, 51 plates, second edition. E. P. Dutton & Co., New York, 1925. \$6.00.

The vanished cities of Arabia with which the author is specially concerned are Petra, Kerak, Aroer and Machaerus, Madaba, Raboth Ammon, Philadelphia, The Decapolis and Jerash. It is a delightful travel book but will not stand too critical an examination from the archaeological standpoint.

Mrs. Erskine is at her best in describing natural beauties or conveying impressions of a particular site. Less successful are her attempts to create the appearance of a place which she has not visited, such as Aroer, for which she must depend on the information of others. With the personal touch lacking, the picture becomes quite intangible.

Some of her descriptions are very sketchy. One would like to know a little more about the mosaic pavement at Madaba, so tantalizingly referred to on page 161, and a description of the capital "not quite like any other," which she says the Nabataeans invented (page 40), would not have been amiss. It is annoying, too, to come across quotations with no indication of the source or even, sometimes, of the author's name.

In speaking of the Temple of Artemis at Jerash she says (page 255), "as a wan-

derer intent rather on the impression of the moment, as it is inspired by the passing scene, and without that inner knowledge which alone makes a treatise on architecture worth reading, I must deal lightly with details." One wishes that the author had maintained this position throughout, thus avoiding the controversy over the date and origin of the Khazne Fur'un at Petra (pages 55-6).

The triumphal gate at Jerash is discussed at some length and attention is called to the acanthus leaves at the base of the columns. The author points out the similarity to the votive column at Delphi which rose from a calyx of acanthus leaves and supported caryatid figures carrying a tripod. She suggests that the columns of the triumphal arch may likewise have supported figures. This is quite impossible since in the case of the arch at Jerash we are dealing with engaged columns which have a definite architectural function, namely, the support of the entablature.

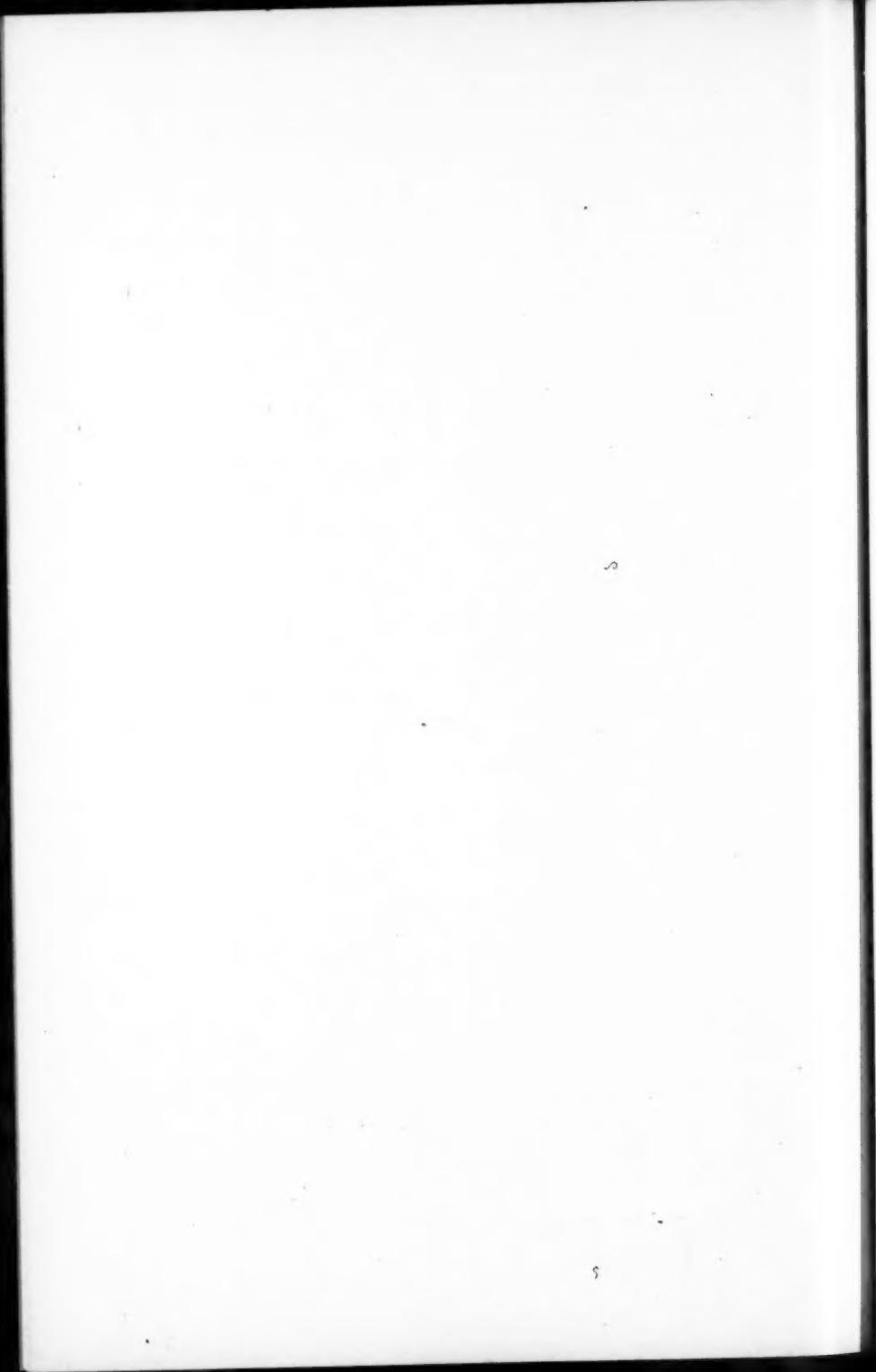
On page 224 the author refers to "the report of the Princeton Expedition" which should be the *Publications of the Princeton Archaeological Expedition to Syria*.

The sites which played an important part in Mediaeval times must have made a special appeal to Mrs. Erskine. *Kerak Besieged* is the most thrilling and vivid chapter of all.

The value of the book is greatly enhanced by the artistic line drawings and glowing color plates by Major Fletcher.

KATE MCK. ELDERKIN

Princeton



1925
January-June

ARCHAEOLOGICAL DISCUSSIONS¹

SUMMARIES OF ORIGINAL ARTICLES CHIEFLY IN CURRENT PUBLICATIONS

EDWARD H. HEFFNER, *Editor*

University of Pennsylvania, Philadelphia

GENERAL AND MISCELLANEOUS

On Ancient Rhytons.—A group of rhytons which are alike in standing upright and in having the small end capped by the forepart of a deer or a deer-like animal, is discussed by F. W. v. BISSING in *Arch. Anz.*, 1923/4, pt. 1 (cols. 106–109). They date from before 1750 to the fifth century B.C., and were made of silver or silver and gold in Asia Minor and Persia and imitated in clay and glass paste in Egypt. The shape is undoubtedly derived from the horns of animals used for drinking.

Painted Chinese Jar from the Tomb of the Later Han Period.—In *B. Metr. Mus.*, XIX, 11, 273–274 (3 figs.), S. C. B. R(ERTZ) discusses a jar in the Metropolitan Museum belonging to a pair the other of which is in the British Museum. Round the body of the jar is a broad band containing a realistic hunting scene drawn upon white chalk and filled in with other colors. On the neck of the vessel are two bands containing lozenge decorations, while on the rim is a leaf decoration. The jar is described as a specimen of the earliest known Chinese painting, which is remarkably skilfully executed.

A Parthian Hoard of Coins.—No detailed study of a Parthian hoard has heretofore been published; but the recent discovery of such a collection near the town of Mandali, on the Persian border of Irak, gives E. T. NEWELL opportunity to discuss thoroughly three hundred and four pieces from that source. Since they came under his cognizance, fifty-seven more from the same hoard have appeared, and it is believed that a large number of yet others have been acquired by a collector in Persia. The three hundred and four are Seleucid, Cappadocian, Bactrian, Alexandrine, and Parthian. The earliest coins are three Alexandrines of about 310 B.C.; the latest dated is of 99–98 B.C. The hoard was probably buried between 90 and 85 B.C. The study adds decidedly to our knowledge of the history of the period, and "offers a most welcome and complete corroboration of Wroth's theory on the probable distribution of certain coins among the five Parthian kings from Mithradates I to Mithradates II" (*Num. Chron.*, 1924, pp. 141–180; 6 pl.).

Scythian Bronzes.—In *B. Metr. Mus.*, XIX, 12, 296–298 (4 figs.), S. C. B. R(ERTZ) discusses several pieces of bronze of the pure Scytho-Sarmatian type lately acquired by the Metropolitan Museum and found in southern Mongolia and possessing unusual interest. A round plaque covered with a sheet of gold shows

¹ The departments of Archaeological News and Discussions and of Bibliography of Archaeological Books are conducted by Professor HEFFNER, Editor-in-charge, assisted by Professor SAMUEL E. BASSETT, Professor C. N. BROWN, Miss MARY H. BUCKINGHAM, Professor SIDNEY N. DEANE, Professor HAROLD N. FOWLER, Dr. STEPHEN B. LUCE, Professor CLARENCE MANNING, Professor ELMER T. MERRILL, Professor LEWIS B. PATON, Professor JOHN C. ROLFE, Professor JOHN SHAPLEY, Professor A. L. WHEELER, and the Editors.

No attempt is made to include in this number of the JOURNAL material published after June 30, 1925.

For an explanation of the abbreviations, see pp. 115–116.

a bear clutching two rams. The artistic qualities are good, and the work is associated with the Scythian art that developed under classic influence in southern Russia. With this is compared the Phalère d'Avers in the Cabinet des Médailles in Paris, which was described in the *Revue Archéologique* as a roundel, a part of a harness. The piece is valuable for the study of the relations between the Gallic and Sarmatian tribes. A gilt-bronze clasp shows two winged galloping horses. The wings of the horses remind one of Pegasus, as does also the boldness of the modeling. This classic influence is explained as being probably Bactrian. A large silver-plated bronze buckle is described as the best illustration of the pure Chinese type with strong Scythian influence.

THRACE.—**Monuments of Religious Syncretism.**—In *Bulletin de l'Institut archéologique bulgare*, I, 2 (1921–22), pp. 137–145, GAVRIL I. KATSAROV describes several fragments bearing figures which can be related with the cults of ancient Thrace and often identified with the Kabiri. The largest of these gives a fairly complete rendering (though some figures are indistinct) of two horsemen with a female figure in the centre and a male figure on either side. He follows Rostovtsev in denying these fragments to the Kabiri cult and points out similarities with the cult of Mithras and other Iranian and Semitic deities. The whole works show the fusion of several different elements in Thrace in ancient times.

EGYPT

The Ancient Libyans according to Egyptian Sources.—In *Z. D. Morgenl. Ges.*, LXXVIII, 1924, pp. 36–63, G. MÖLLER gathers up all the references to the Libyans in Egyptian inscriptions, and illuminates these from classical and ethnological sources. The comprehensive name for Libyans in Egyptian is *Tehenu*. They first appear in pre-dynastic inscriptions. They are depicted with dark skins and dark hair. Men and women alike wear a curl on the forehead, a necklace, two broad leather bands crossing the breast, and a wide girdle to which a phallus pocket is attached. Even the women wear this pocket over a small apron, probably as a symbol of royal authority, like the male attire worn by Queen Hatshepsut. This costume resembles the earliest Egyptian, and linguistically and in other ways there was a close connection between the Egyptians and the Libyans. About 2400 B.C. the new clan of the *Tuimah* appears among the Libyans. These are represented as blond and blue-eyed. They wear caps of ostrich skin, and tunics that reach to the knee. These are to be regarded as immigrants from Europe who largely displaced the primitive Hamitic Libyan population. Both ethnological types continue to appear in the later inscriptions, and continue down to the present time.

The Prostrate Figure in Egyptian Art—The motive of the fallen or falling human figure, in four types (fallen backward, fallen forward, and half raised from each of these positions), as developed in Egyptian art from the primitive period through the Old, Middle, and New Kingdoms, is discussed by F. MATZ in *Jb. Arch. I.*, XXXVIII/IX, 1923/24, pt. 1/2 (pp. 1–27; fig.). In the earliest stage, as with children, delineation was constructive, the field answering for horizontal as well as vertical space, without any foreshortening, so that a figure lying on the ground at a right angle to the horizon might seem to be standing on its head, while a cart would show four wheels, one at each corner of the body. During the third, fourth, and fifth Dynasties, the principle of the side view, the nearer side of an object hiding the farther side, came to be better understood, and the system of zones, one above another, to show actions at different distances from the spectator, was adopted; but true perspective was never fully mastered in Egypt. This same period evolved the arbitrary representation of the human figure as a combination of profile, full-front, and three-quarter positions, which persisted to the end, with

only slight modifications. The skill with which this conventional scheme was preserved in a great variety of attitudes, expressive even of emotions, is illustrated by numerous examples from all periods.

SYRIA AND PALESTINE

The Amorites in Western Asia.—In *J.A.O.S.*, XLV, 1925, pp. 1-38, G. A. BARTON subjects A. T. Clay's theory of the antiquity and importance of Amorite civilization to a thoroughgoing criticism. In four elaborate works Clay maintains that the Amorites of Syria possessed a civilization older than that of Babylonia or Egypt, that Amurru was the cradle from which the Semites migrated, that they were the originators of Babylonian civilization, and that from them, and not from the Babylonians, the Hebrews derived the Biblical traditions which bear so close a resemblance to Babylonian traditions.

In opposition to this view Barton maintains: (1) that evidence is accumulating that Arabia was the cradle of the Semites, from the similarity of Hamitic and Semitic languages, from the occurrence of proper names of an Amorite and Hebrew type in the S. Arabian inscriptions, and from the fact that at least three historical Semitic migrations, the Hebrew, the Nabatean, and the Muhammadan Arab, were made out of Arabia. (2) In texts of the time of Ashurbanipal (*mat*) *Mar-tu (ki)*, the Amorite land, is equated with (*mat*) *Mar (ki)*, the land of Mari; from which Clay infers that the dynasty of Mari that flourished in Babylonia in the fourth millennium B.C., according to the dynastic lists, was of Amorite origin. This inference is unwarranted because *Mar* is merely an abbreviation of *Mar-tu* without any idea of identifying Amurru with *Mar* which had disappeared from history fifteen hundred years before. Clay claims that the dynasty of Mari was Amorite. A ruler of Mari in the twenty-fourth century bears a Semitic name, but this is no evidence that the city was occupied by Semites one thousand years earlier. The only early name that we have from Mari is Sumerian. (3) The dynasty of Agade was certainly Semitic, but there is no evidence that it was West-Semitic, that is Amorite. On the contrary, all the Semitic proper names in inscriptions between 3000 and 2500 B.C. are Akkadian, this is, East-Semitic. From this it follows, either that the Akkadians were East-Semitic, or that, if they were Amorites, they were destitute of civilization and adopted the language and the culture of the East Semites. (4) After 2500 we find clear evidence of Amorites in Babylonia, and their gods are connected with creation and other myths, but this does not prove that these myths were brought into Babylonia by the Amorites, but only that they adapted existing Sumerian myths to the cult of their own deities. In this connection attention should be called to E. Chiera's *Sumerian Religious Texts, Crozer Theological Seminary Babylonian Publications*, Vol. I. No. 8 of these texts is an Amorite creation-story in Sumerian. The Amorite editor seeks to adapt old Sumerian material to the praise of the Amorite god Martu. "However, in recounting the good works of Martu, the writer cannot refrain from mentioning the former uncivilized condition of the Amorite people. In fact, in telling of the eating of uncooked food, and the practise of not burying the dead, he goes far beyond what other Sumerian literature had told us about the Amorites."

An Ancient Phoenician Navigation Company.—In the "Travels of Un-amun (Wen-Amon)," about 1100 B.C., the king of Gebal says to the Egyptian ambassador: "In this Sidon by which thou hast passed there are fifty (or even ten thousand?) ships which belong to the company (*heber*) with Birkat-el." In Z. D. Morgenl. Ges., LXXVIII, 1924, pp. 61-63, R. EISLER calls attention to the fact that substantially the same name for a shipping firm occurs in the Testament of Naphtali: "This ship belongs to the son of Barak-el, together with all the valuables that are in it." Whether this indicates that the firm of Barak-el, Sons, and Co.,

continued to exist from 1100 B.C. down to 150 B.C., three times as long as the oldest English and Hanseatic maritime companies, is doubtful. It shows at least that memory of this famous old shipping house lingered in Hellenistic Phoenicia. A parallel is seen in the Babylonian banking houses of Murassu Sons, and Egibi Sons, whose records were discovered at Nippur.

The Early Sinaitic Inscriptions.—In 1906 Petrie published several inscriptions from the traditional Sinai in an unknown script that he assigned to the time of the eighteenth dynasty. These have since been made the subject of elaborate study by Gardiner, Peet, von Bissing, Sethe, Bauer, Eisler, Völter, and Hans Jensen, all of whom have regarded this as a forerunner of the Semitic alphabet developed out of Egyptian, but who have reached very different conclusions in regard to the values of the signs and the meaning of the inscriptions. One of the most recent attempts is that of H. GRIMME, *Althebräische Inschriften von Sinai*, 1923, who reaches the conclusion that these inscriptions date from the time of Moses. No. 350, in particular, he translates: "I am the foster-son (*mōsē*) of Hatshepsut, chief of the miners, prince of the temple of Ma'na and of Yahweh of Sinai. O Hatshepsut, beloved of the Ba'alat, thou wast kind to me, thou hast drawn me out of the Nile, and thou hast set me over the pronaos of M."

These conclusions are subjected to an elaborate criticism by J. B. SCHAUMBERGER, in *Biblia*, VI, 1925, pp. 26-49, who comes to the conclusion that the system by which Grimme has identified the Sinaitic characters with Egyptian hieratic signs is highly artificial, that his assumption that the letters stand in no regular order left to right, right to left, or boustrophedon, is most unnatural, that his identifications of characters are not consistent with his own system, and that, therefore, his translations are uncertain to the last degree. Though much exploited by the newspapers, this alleged Mosaic inscription has no scientific standing.

The Eyes of the Cherub.—The general meaning of the cherub is clear. It is the thunder-cloud on which Yahweh rides, viewed as a living chariot, and described in terms of Egypto-Hittite Phoenician art. But what is the meaning of the eyes with which, according to Ezek. 1: 18; 10: 12, both the cherubs and their wheels were covered? In *Arch. Rel. Wiss.*, XXII, 1924, pp. 257-265, A. JACOBY shows that the numerous eyes that are ascribed to God, or celestial beings, are found not only in the Hebrew cherubs, but also in Egypt, Persia, India, and Greece. The symbol is closely connected with the starry heavens; whose stars are regarded as eyes of the deity, or of his servants, and express the divine omniscience, whose numerous eyes nothing escapes.

Frescoes from Salihiyah.—In *Rend. Acc. Lincei*, XXXII, 212-216, FRANZ CUMONT discusses a series of frescoes discovered at Salihiyah on the right bank of the Euphrates, midway between Aleppo and Bagdad. They adorned a temple of the city of Dura, which was called by the Greeks Europos and which formed part of the state of Palmyra. These frescoes were first hurriedly studied and photographed by James Breasted, of Chicago, at the time of the British occupation of Palestine, but the abandoning of the place by the English a few hours after his arrival cut his studies short. A more satisfactory photograph has since been taken. The temple thus decorated was consecrated to Zeus, Jarhibol, and Aglibol. One fresco represents two Semitic priests clothed in white and discharging their office with bare feet according to their rite; one is dipping a green branch in a jar and the other places incense on a blazing altar. On the same side of the temple is a similar fresco with three figures. These paintings date from the first century of our era and the name of the artist is given as Ilasamsos. Cumont feels that these paintings are of very great importance in investigating the origins of Byzantine art.

Opposite these is a series of a very different type, which dates from Roman

times, about the close of the second century, or the beginning of the third. Before an altar stands an official clothed in a white tunic with a red border, and holding a sword, but without either helmet or cuirass. At the side of the figure are the words *Iulius Terentius tribunus*. Near him stand eight of his officers and a group of fifteen of his soldiers, who are equipped much as their commander. Near him stands a figure inscribed *Θύης Μοχλων λεπέσ.* In the background are three statues of divinities with nimbi, and wearing the usual Roman military costume with cuirass, paludamentum, laced shoes, etc. These were at first thought to be *imperatores*, but Clermont-Ganneau thinks that they represent rather the three gods Bêl, Jarhibol, and Aglibol, thus Romanized for the sake of the army. At the feet of the statues sit two female figures inscribed the Tyche of Dura and the Tyche of Palmyra, with other symbolic figures. These are obviously in imitation of the famous group of Eutychides representing Antioch sitting on its hill beside the Orontes. A Latin inscription states that the painting is a dedicatory offering to the Emperor Alexander Severus (239 A.D.). We thus see that the Roman occupation extended further into the Syrian desert than we had before imagined, controlling the entrance into Mesopotamia.

What Has Become of the Philistines?—In *Pal. Ex. Fund*, LVII, 1925, pp. 37-45, 68-79 (4 figs.), R. N. SALAMAN discusses the three distinct racial types that are found among the modern Jews. The first of these is the Semitic type, with a long face and long nose that is not hooked, like the pure Bedawy Arab type and the early Egyptian representations of Semites. It goes back to the pure-blooded primitive Hebrew invaders of Canaan and to Semitic Amorite admixtures. It is exhibited by only fifteen per cent of modern Jews. Second, the Hittite, or Armenoid type. This has a round face and large hooked nose, exactly like the Hittite sculptures and the Egyptian representations of Hittites. It goes back to the aboriginal pre-Semitic population of Canaan and to the Hittite invaders. It is found in fifty per cent of modern Jews, and has come to be regarded as the characteristically Jewish type of face. Third, the Pseudo-Gentile type. Among Jews of the purest Jewish descent about twenty per cent show a fair-skinned, long-headed type, with small, delicate features and Greek noses. These could easily pass as Gentiles. This type is not due to Teutonic admixture in Europe, since in mixed marriages the Teutonic type is dominant, while the Pseudo-Gentile type is recessive. It is due to the absorption of the Philistines by Israel. The Philistines came from Crete, and their racial type as depicted in the Cretan and the Egyptian monuments was identical with the modern Pseudo-Gentile Jewish type.

GREECE ARCHITECTURE

On the Temple of Zeus at Olympia.—The peculiar construction of the foundations of the middle portion of the cella of the temple of Zeus is discussed by K. LEHMANN-HARTLEBEN in *Jb. Arch. I.*, XXXVIII/IX, 1923/24, pt. 1/2 (pp. 37-48; 5 figs.). Here a square space, of the full width of the nave and immediately in front of the enclosure containing the chryselephantine statue of Phidias, was paved with black Eleusinian marble resting on a solid foundation of poros blocks into which were inlaid eight wide longitudinal stripes of white limestone blocks. From the cuttings and projections on the surface of these limestone blocks it is evident that they served to support various dedicated statues or other heavy objects, which were arranged with some symmetry and with regard to the convenience of visitors. A somewhat similar arrangement of rows of limestone blocks, but laid only in earth, is found in the temple of Asclepius at Epidaurus, and elsewhere. Evidently when a famous temple was rebuilt, the works of art that had been dedicated in the older temple were gathered together in a space

reserved for this purpose in the new building, as in the Heraeum at Olympia, where the Hermes was found; and this was a feature of the temple of Zeus when built by Libon. When the great work of Phidias was installed, these lesser statues were removed and the dark pavement was laid, to enhance the effect of the shining gold and ivory.

SCULPTURE

Antiquities in the Park at Wörlitz.—Some pieces from the collection of antiques at Wörlitz, which was divided in 1918, are described by K. SCHULZE-WOLLGAST in *Arch. Anz.*, 1923/24, pt. 1/2 (cols. 24–38). A broken low relief of three youths carrying off a female captive, which probably represents the sacrifice of Polyxena, is not very skilful work, but bears some resemblance to the frieze of the Monument of Lysicrates (334 b.c.). A Hellenistic relief of a winged boy standing before a doorway in a wall of ashlar masonry and rescuing a cock from its antagonist, appears to represent the god Agon, erected by the victor in a cock fight. Two small bronze figures of Athena and Aphrodite belong to the end of the second century A.D. A seated Fortuna with a snake around the right arm and showing traces of red paint, resembles the reliefs on the Arch of Trajan at Beneventum.

A Copy of the Head of the Ludovisi Ares.—In *Jh. Oest. Arch. I.*, XXI–XXII, 1924, pp. 203–221 (pl.; 7 figs.), C. PRASCHNIKER publishes a marble head found in 1916, built into a wall at the convent of Ardenica in central Albania. He identifies it as a copy of the head of the Ludovisi Ares. It dates from early in the third century b.c. The Petworth Aphrodite head is closely related to it.

The Establishment of the Classical Type in Greek Art.—An epitome of more extensive studies on this subject, by CHARLES WALSTON, is published in *J.H.S.*, XLIV, 1924 (pp. 223–253; 17 figs.). The traditional, pre-Hellenic, or "Minoan" type of the human figure,—the triangular torso with wasp waist accentuated by overdevelopment of the lower parts, the triangular face with long, pointed nose and retreating forehead and chin, and the round eye in flat, almond-shaped socket,—is shown in perfection in frescoes from Knossos and other Cretan and Mycenaean remains. It is the type of the *acrobats*, especially the *toreador*, and it dominated all art in its time, because it represented the sport most pleasing to royalty. The growth of democracy in Greece, with its love of truth and its need of the personal service to the state of each individual, developed as its ideal the perfect physical type of the *ephebus*, the youthful athlete, through the palaestra and the agonistic games. These two institutions gave artists the opportunity of studying not only the naturally developed figure but every possible attitude and movement as well as the occasion for exercising their skill in commemorating victories and the scenes of the palaestra. During the century from the middle of the sixth to the middle of the fifth century b.c. the process of eliminating the unreal and conventional element from works of art was going on, more rapidly in the last thirty years, until the "classical" type was finally established in the time of Phidias and the Parthenon sculptures. Almost all works down to this time show traces of the inherited style, the shapes of head and eye retaining the archaic touch longer than the body. The female nude figure and drapery also followed the development of the male type, not quite *pari passu*. The influence of religion, always conservative, and its kindred feeling of reverence for the state, retarded the full use of the artists' increasing skill in realism, as is shown by the occurrence in the same period and in the same composition, of the archaic type for divinities or for the ideal (youthful) citizen, with extremely realistic types of centaurs, satyrs, negroes, old people, and other minor figures. This conservatism was especially strong in Attica, and Argos first attained entire freedom and naturalness; the "classical" type of head, with a half-square shape for the front half, only the tip of the nose breaking the vertical line of the face, is Polyclitan, and Athenian

sculptors, like Alcamenes and Phidias, learned it at Argos, in the school of Ageladas. The complete transition in the work of these two artists falls between the East and West pediments of the temple of Zeus at Olympia and between the metopes and the frieze of the Parthenon. A faint reminiscence of the Attic preference for the elongated or "animal" type of face is still traceable in the fourth century in the long heads of Praxiteles, contrasted with the round heads of Lysippus. In the third century, in the schools of Rhodes and Pergamon, realism was unshackled. The various stages and branches of this development, especially in sculpture and vase-painting, are fully illustrated here by cuts and by references to other publications.

The Master of the Niobe Group.—In early and fifth-century Greek art, the story of Niobe was represented only by the figures of the avenging deities Apollo and Artemis, and the children upon whom the punishment fell. It belonged to the type of battle scenes. But in the great fourth-century group, to which the originals of the Niobid statues at Florence belonged, the emphasis had passed over from movement to sentiment; Niobe herself was the principal figure and the centre of the whole composition, or rather she stood at the apex of a pyramidal group in which the bases of the separate figures were at different heights, while the gods who shot their arrows from heaven were not shown. Certain characteristics of these statues and other works, such as the diagonal action of the figure, the upraised, protecting arm, and the fall of draperies, point to a common origin, namely the artist Timotheus, for a group of sculptures which includes the well-known Leda and the Swan, the grave stele of Aristonauetes and the female head from the south slope of the Acropolis at Athens, the Epidaurian sculptures, and certain portions of the frieze of the Mausoleum at Halicarnassus. Timotheus, although he shared with Scopas and the two younger men, perhaps their pupils, the most important artistic commission of the century, was not reckoned among the artists of the first rank. His forte is a sort of external pathos, expressed in the figure rather than in the face, as with Scopas; and it finds its highest development in the Niobe group. F. WINTER, *Jb. Arch. I.*, XXXVIII/LX, 1923/4, pt. 1/2 (pp. 49–57, double plate; fig.)

The Nike of Paeonius at Delphi.—In *Jb. Arch. I.*, XXXVII, 1923, pt. 3/4 (pp. 55–112; 16 figs.), H. POMROW gives the results and the details of an intensive study of all the evidence, epigraphical, archaeological, and historical, for the bronze statue of Victory by Paeonius at Delphi. This involves a reconstruction and comparison of the two triangular pillars at Delphi and Olympia with their inscriptions, a discussion of Grütter's (1919) restoration of the marble statue at Olympia, the noting of errors in the re-erecting of the Delphian pillar with plaster and of the loss of important inscribed fragments at Delphi, and a sketch of the later history of Delphi down to its total destruction by earthquake in the sixth century A.D. The original Nike of Paeonius was a bronze statue erected at Delphi in 425 B.C. by the Messenians and Naupactians as a thank-offering for victories at Leucas, Ambracia, and Olpae, where they had fought as allies of the Athenians in the preceding summer and winter. At about the same time they ordered a marble replica of the statue in honor of the victory at Sphaerateria (June, 425), in which also they had a share. The Athenians meanwhile erected two bronze Victories on the Acropolis, presumably in front of the Temple of Victory, one for Sphaerateria and the second for various operations on the west coast during 426 and 425, partly the same as those commemorated by the Messenians at Delphi. The second of the Athenian statues and the Messenians' bronze statue were both repaired about a century later by Menecrates of Thebes. These facts can be traced in fragments of the original inscriptions, helped out by literary tradition. When, after the truce of 423, Olympia was opened to the allies of Athens, the Athenians erected the marble Victory there, as a political demonstration against Sparta, though the general expression *ἀπὸ τῶν πολεμίων*

was used in the dedication. The two statues of Paeonius were over life-size and were supported by tall, slender pillars on which they seem to have alighted from flight. In each case the three-sided pillar, of Pentelic marble resting upon a rectangular ground-base of red sandstone, consisted of a high basement or pedestal of three blocks of marble with vertical sides but slightly stepped back, then a lower moulding, then the slightly tapering shaft of eleven or twelve blocks, and an anta capital. The capital was ornamented with patterns in colors and each face of the shaft bore a bronze shield near the top,—at Delphi the tall Spartan shield, at Olympia, round. The pillar at Olympia was slightly thicker than at Delphi, about 6 cm. in each horizontal measurement, because of the greater weight of the marble figure. The statue with the conical base necessary to prevent the feet from being hidden at so great a height, measured about nine feet out of the total of thirty-nine or forty Greek feet for the whole monument. The bronze statue was gilded, the marble one tinted and painted. There are remains of purple on the inside of the mantle and pink on the chiton. The monument at Delphi stood in the corner at the west end of the Stoa of the Athenians, facing southwest towards the Sacred Way and close in front of the polygonal wall, some fifteen feet high, which supports the middle terrace, and with the still higher Temple of Apollo as background for the statue. At Olympia the background of the open sky made necessary, for the proper effect, the white and polychrome marble. The dedicatory inscription and sculptor's signature were on the main face, some ten or twelve feet from the ground. The line about the contest for acroteria which follows the signature at Olympia was a nearly contemporary addition. The inscriptions were in the Dorian dialect because that was the speech of the dedicators, but Ionian in spelling because arranged by Paeonius of Mende, an Ionian town, while the forms of letters vary, as Φ, Θ, because cut by local workmen. On the block above the original inscription at Delphi, and presumably on a bronze tablet inserted in a corresponding position on the shaft at Olympia, was a second dedication, perhaps metrical and perhaps added after the liberation of Messenia. The Menecrates signature was below. In later times, as was the custom with all blank surfaces at Delphi, the sides of the monuments were used to record proxenies and other honorary decrees of the Messenians and Naupactians. The whole idea of the tall, slender, three-sided pillar seems to have been original with Paeonius, but it was imitated by Phryne when she dedicated her own statue by Praxiteles at Delphi two generations later, and other gilded statues on similar high monuments were erected there in later centuries. Christianity was introduced at Delphi in the first half of the fifth century A.D., and a bishopric established there. The great Temple of Apollo was used as a Christian church with but slight alterations, only an additional cross-wall in the foundations marking the line of division for the choir. Delphi lay in an earthquake zone which stretched nearly east and west across central Greece from Patrae to Chalcis and Eretria, passing north of Attica; but in spite of numerous lesser shocks, the chief buildings and monuments of the sanctuary remained substantially unharmed until overthrown by the great earthquake of A.D. 551, the most severe shock recorded for that region except that of 1870. This catastrophe destroyed the entire town as well as the sanctuary, and the site remained desolate and practically uninhabited for many centuries. The blocks of the upper half of the pillar of Nike fell toward the northeast, and the lower blocks were found on the slope below the original site of the monument. A few blocks between have been entirely destroyed, but as this part of the pillar at Olympia is preserved, it is possible to reconstruct them both with a fair degree of accuracy.

PERINTHUS.—A Bronze Head.—In *B.C.H.*, XLVIII, 1924, pp. 276–286 (3 figs., pls. IV–VII) P. DE LA COSTE-MESSELIERE publishes a bronze head from Perinthus, now in the possession of M. Stamoulis at Athens. This head is a

replica of the same original as the so-called "Berenice" from Herculaneum, and now at Naples, as is proven by the illustrations, where the two heads are placed side by side. They are not, however, cast from the same mould, as is shown by certain differences in expression between the two. The particular value of the Perinthian head is due to the information it gives us concerning bronze technique of the Graeco-Roman period: for it is known that the head in Naples was considerably retouched and restored after its discovery. An examination of the interior reveals that it was cast in one piece by the sand process, and that it was cast separately from the body on which it was to fit. The patina is of the blue type, is very uniform in character, and is found in the interior as well as outside. It is a natural patina. After the casting, details were rendered by a very skilful use of the chisel, especially in the treatment of the hair. The writer is of the belief, however, that it can be established, from a comparison of the technique with that of the head in Naples, that the head was left unfinished by the sculptor. Finally the suggestion is made that there is nothing to prohibit the belief that these two heads are idealized portraits of a common original, and not necessarily, as has been previously suggested for the head in Naples, to be considered as Artemis or an amazon.

A Note on Two Satyrs.—In *Jh. Oest. Arch. I.*, XXI-XXII, 1924, p. 251, J. SIX emends a passage referring to two satyrs in Pliny, *N.H.*, XXXVI, 29. It should read *Satyri quatuor ex quibus unus Liberum patrem umeris praefert, alter' Liberam, palla velatam, similiter, etc.*

The Statues of Aphrodite at Elis.—In *Jh. Oest. Arch. I.*, XXI-XXII, 1924, pp. 222-228 (2 figs.), A. SCHÖBER points out that there were two statues of Aphrodite at Elis, one the cult statue of gold and ivory by Phidias, of which no copy has been known hitherto; the other a bronze statue by Scopas. He publishes two badly preserved statuettes in Vienna which he thinks are free copies of these works.

Two Bronze Statuettes of Apollo in Sofia.—In *Bulletin de l'Institut archéologique bulgare I*, 1 (1921-22), pp. 1-20, B. FILOV discusses two bronze statuettes of Apollo which are preserved in the National Museum of Sofia. The first of these is of value as a work of art. It was discovered in 1901 in the ruins of an ancient building near Stara Zagora. It is a standing figure and apparently originally rested on its right hand, which is missing, upon a lost column. The left hand seems to have held a bow or a cithara, but this arm was broken and restored in ancient times. There is no definite parallel to the type, but the general style reminds us of several statues of the school of Praxiteles. Thus the head of the Apollo Sauroctonus is similar, and other resemblances point to relationship to the Apollo statue in the Palazzo Vecchio in Florence. It seems to be Hellenistic or an early Roman copy of a marble work of the school of Praxiteles.

The second statuette is of relatively little artistic value, but it shows marked similarity to the statue of Apollo represented on the coins of Antigonus Gonatas or Antigonus Dozon, and may be a reproduction of the same statue.

VASES AND PAINTING

An Early Helladic Gold Vase.—A vase of the "sauce-boat" type, of exceedingly thin beaten gold, with ring foot and the long open spout or nose, from which the shape is named, has been in the Louvre since 1887, and is said to have been found near Heraion, in western Arcadia. It is published by V. GORDON CHILDE in *J.H.S.*, XLIV, 1924 (pp. 163-165; fig.), with references to the various places where clay or stone vases of similar shape have been found and to the occurrence of early gold objects. It belongs to the Early Helladic culture of about 2600 B.C. and marks one point on the east-west route of trade and intercourse which extended from Asia Minor across the Aegean islands and as far as Sicily. Recent

discoveries in this "Helladic" culture, though still fragmentary, suggest that the mainland of Greece, in the third millennium B.C., was on an equal footing with Crete and the Cyclades in a great maritime confederacy.

Imagines Illustrum.—To his discussion of the sculptured portraits of Menander and others, F. STUDNICZKA adds some studies of early Hellenistic painted portraits (Theocritus and the family of Demetrius Poliorcetes, both in later copies), in *Jb. Arch. I.*, XXXVIII/IX, 1923/24, pt. 1/2 (pp. 57-128; 2 pls.; 21 figs.). The epigram in which the Syracusean poet distinguishes himself from the orator, Theocritus of Chios:

Ἄλλος δὲ χῖος · ἄγω δὲ Θεόκριτος δέ ταῦτα ἔγραψα
εἰς ἀπὸ τῶν πολλῶν εἰμι Συρακοσίων,

was apparently the legend of a portrait-frontispiece on a copy of the poems, and this suggests that a similar contemporary miniature portrait may have been the original of a lively little mediaeval illustration in Ms. 2832 of the Bibliothèque Nationale at Paris, which is probably not earlier than 1250. Here the poet is shown presenting his poem The Syrinx, with a low bow to the god Pan. That the shape of the syrinx has been changed from the graded series of pipes to a short double flute, and the poet has been given a long-sleeved shirt to wear under his rustic exomis, while his laurel crown has become a close-fitting cap, still retaining the strings that bound it on, are inconsistencies which mark the rest of the composition as derived from tradition. The far from classic features of the poet perhaps explain why he was not made the subject of some more important work of art.

The paintings on the side walls of the large dining room of the villa of Boscoreale, each in three sections, of which the two remaining of the west wall are at Naples and the three of the east wall in the Metropolitan Museum in New York, have been interpreted as mythological subjects, but they are almost certainly historical. They show full-sized figures, somewhat damaged but full of individual character, which appear to be seated or standing immediately in front of the wall, two in each middle panel and one in each side panel. The middle group of the west wall is a harsh-featured young man seated out of doors, grasping a spear, and in front of him, also seated and looking earnestly and lovingly at him, a somewhat heavily developed older woman. The devices on the shield which stands between them, his cap with diadem, and other traits are those of a Macedonian king, undoubtedly Antigonus II, Gonatas, son of Demetrius Poliorcetes, and his mother Phila, a woman of distinguished character and ability. The elderly man in the left-hand panel, who wears the dress and staff of a philosopher, is one of the young king's teachers, perhaps Menedemus, while the missing right-hand figure may well have been his favorite mistress Demo, mother of his bastard son Halcyoneus. On the opposite wall, the central group is again a woman of mature years talking earnestly with a man. His figure, though much damaged, shows a powerful, maturely developed warrior, resting after a journey and divested of his accoutrement with the exception of the loosely worn chlamys. In this scene we have Demetrius himself, when, after the loss of his Macedonian throne and the death of Phila, he visited his sister Eurydice in Asia and arranged his second marriage with her daughter Ptolemais. Ptolemais herself is seen in the right-hand panel, looking back as she bears away the shield of the visitor, an epic service corresponding to his heroic nudity. The left-hand panel, facing the presumptive Demo, shows a handsome and carefully dressed young woman, seated and playing the cithar,—probably one of the famous courtesans of the time, Leaina or Myrina. The pictures were painted on the walls at Boscoreale probably about the time of Sulla, but they have the appearance of being copies from early Hellenistic originals. The style lies between the period of Lysippus and that of

the Pergamene sculptures, rather nearer to the former, while the historical connections suggest a date between the death of Phila in 288 B.C. and the rather late marriage of Antigonus to his niece Berenice in 276.

The Pottery of Naucratis.—Some hundred and sixty odd fragments of Naucratite pottery, chiefly in the British, the Fitzwilliam, and the Ashmolean Museums, with a few entire vases and a table of patterns, are published in *J.H.S.*, XLIV, 1924 (pp. 180–222; 7 pls., 63 figs.), by E. R. PRICE. She sketches the probable history of the ware, with its relations to the history of the city and to the wares of the founding cities of Naucratis, chiefly Rhodes, Miletus, Aegina, Chios and Clazomenae. In the earlier stages, the seventh and early sixth centuries, Rhodian influence was strongest; after the reorganization of the colony in 570 B.C., that of Clazomenae, and in the period of decline, Corinthian. Dominant characteristics of the ware throughout are the fineness of the technique, the use of a creamy white slip, and the dark painting of the interior of the vessels. The two main divisions chronologically, A and B, are distinguished, among other points, by the lack of incision in A. The very great majority of Naucratite vessels are flaring, two-handled cups, resembling the modern chalice, and like that, designed for ritual use. Great numbers of these cups together with pyxides and other shapes are found on temple sites in all parts of the Greek world, including Aegina, Sicily, and Russia, but almost none on the mainland of Greece. The not very common inscriptions are dedicatory, with one exception, *καλης εμι*.

Vase Fragments at Leipsic.—Of the collection of shards from Caere that were presented to the Antikenmuseum of the University of Leipsic in 1906, some which have not been fully published heretofore are pictured and described in detail by A. RUMPF in *Arch. Anz.*, 1923/4, Pt. 1 (cols. 44–95; 23 figs.). They include parts of five early Attic vases (pelicae and bowls), three Tyrrhenian amphoras, four Corinthian cratera, three Laconian cylixes, a Caeretan hydria, and an Italian polychrome bucchero amphora. Four of the Attic vases represented are important both as examples of Athenian pottery at the beginning of the black-figure period (first half of the sixth century) and as evidence of the export trade of the period. Among them, a piece of a pelice showing the lower half of a running winged Gorgon is by the painter of the Netos amphora at Athens and of a cylix from Aegina now in Berlin. The Leipsic and Berlin pieces show unmistakable signs of the former existence of red and white paint, now disappeared, applied over the black glaze, and thus prove the continuity of this technique in Attica from Geometric times. Other pieces are among the best examples of animal drawing in this early period. A fifth vase, slightly later, is an example of the early black-figure pelice with reserved field. Of the Tyrrhenian amphorae, one has the departure of Amphiaraus on A, and on B, the introduction to Olympus of a woman, probably Pandora, led by Hephaestus and escorted by Hermes. Meaningless inscriptions with both pictures. No animal frieze. The departing warrior on a second of these vases may be an Amphiaraus, though some of the usual accompanying figures are absent. This vase, with three in the Louvre and one (unpublished) at Oxford, are by the same painter. The third amphora has a scene with Heracles and centaurs which is apparently a *contaminatio* of the Nessus and Dejaneira episode with the affair of Mount Pholoë. It shows a marked feeling for symmetry. Of the Corinthian cratera (*vasi a colonnette*) the first shows cocks drawn in large scale and full detail; the second, with men on foot and riding, and sirens, has the surface and the original color effect in black, white and red, admirably preserved. A third shows fragments of Dionysiac dancing demons and a symposium; and the fourth, the unusual combination of a galloping quadriga in a combat scene. The last is one of a small group of cratera, all by one hand, in which the body is widest near the top and tapers sharply down toward the foot,—a form common in Chalcidian and Laconian ware but exceptional in Corinthian. Of the three Laconian cylixes,

all of L. IV period, the first with a winged horse for device, without separate ground segment, is of especially delicate workmanship. The second has a scene including Zeus with the thunderbolt, perhaps a Gigantomachia, and a hippocamp in the lower segment. The third, with a picture of two youths dancing and playing the flute beside a huge crater, is of ordinary merit only. The fragments of a Caeretan hydria, already discussed by Loeschke in 1894, show a garland of ivy leaves and berries on the shoulder, and of the main pictures, only a head of Achelous apparently in combat with Heracles from A, and parts of two deer from B, with lotus-palmette pattern beneath. The polychrome amphora, undoubtedly Italian, has been discussed by various writers since 1881. The decoration in white, red, blue, and green, covers the entire vase with stripes, bands, and conventional devices of many kinds, while the wide ribbon handles have animals in relief and gaily painted, walking on a vertical ground line. The shape of this amphora corresponds so closely to that used at Athens by Nicosthenes that it must be at least contemporary with his work, hence to be dated about 530-520 B.C.

INSCRIPTIONS

A Boeotian Inscription.—In *Rend. Acc. Lincei*, XXXIII, 89-92, P. VINOGRADOFF, replying to an article by Brandileone in *Rend. Acc. Lincei*, XXXII, 105 ff., discusses the light cast by a Boeotian inscription, published by Daresté, Haussoullier and Reinach, *Recueil des inscriptions juridiques grecques*, I, 276 ff., on the question as to whether there existed in Greek jurisprudence abstract contract-rights based on an *obligatio litterarum*.

Five Attic Decrees.—In *Jh. Oest. Arch.* I, XXI-XXII, 1924, pp. 123-171 (2 figs.), A. WILHELM publishes the results of his study of five Attic decrees. 1. *I.G.*, I, suppl. p. 65, 35c, which Kirchhoff dated in 429-28, really dates from 411-10. *I.G.*, I 82 belongs to it. A restoration of the whole inscription is attempted. 2. In the decree in honor of Pythophanes (*I.G.*, II², 12) the early part of the inscription dates from the time of the Four Hundred and the later part from 399-98. 3. He discusses and restores *I.G.*, I, 87, I, suppl. p. 196, 116², *I.G.*, I, 106 and *I.G.*, I, 105, six pieces in all, belonging to the same decree. 4. He restores *I.G.*, I, 36 and I, suppl. p. 195, 116² to which *I.G.*, I, 74 also belongs. The decree dates after 427-26. 5. He restores the decree *I.G.*, II², 10A by which the men who came from Phyle and took part in the battle of Munychia were rewarded. It dates from 401-400 B.C.

Greek Epigraphy in 1923-1924.—A summary of recently published articles and books dealing with Greek inscriptions, with indications of their contents and with mention of some new inscriptions, is published by M. N. TOD in *J.H.S.*, XLV, 1925, pt. I (pp. 102-119). The contributions are the work of scholars in England, France, Germany, Greece, Italy, the United States, and other countries. Among the important general works cited are: a new periodical in Latin, *Supplementum Epigraphicum Graecum* (*S.E.G.*), published at Leyden; the completion of the third edition of Dittenberger's *Sylloge Inscriptionum Graecarum*, with part 2 of volume IV, by F. Hiller von Gaertringen; a section on Greek Epigraphy in Gericke and Norden's *Einleitung in die Altertumswissenschaft*, by the same author; the epigraphic portion of Deissmann's *Licht vom Osten*, fourth edition, dealing with New Testament and early Christian material; a new edition of Cauer's *Delectus*, entitled *Dialectorum Graecarum exempla epigraphica potiora*, containing 834 complete texts and parts of others, with appendices on early Attic, colloquial, and barbarian inscriptions and ancient authors mentioning dialects; the small, very much improved, new edition, in one volume of *Inscriptiones Graecae* I (*I.G.*, 1,²) containing Attic inscriptions down to 403, a *Fasti Attici*, and excellent indexes, the work again of Hiller von Gaertringen, and Hoppin's *Handbook of B. F. Vases*.

There are numerous articles on the known examples of Minoan writing and on the origin of the Phoenician or Cadmeian alphabet, which bear directly or indirectly on the origin of the Greek alphabet. Special articles are classified geographically under Attica, Peloponnesus, and Central and Northern Greece. Among them may be mentioned: discussions of the oldest extant Attic inscription, ΤΟΤΩΔΕΚΑΝΜΙΝ, variously divided and interpreted; of the Erythraean and Phaselite decrees and the decree relating to Calliteres' building operations on the Acropolis; the archaic sculptured bases found in the Themistoclean city wall; the ostraka from the Ceramicus, written by forty-three citizens of Athens on a single day in a definite year, generally agreed to be 443 B.C., the year of the ostracism of Thucydides; decrees concerning the demes of Halimus, Cholargus, and Rhammus, and a Salimilian thiasus; some material indicating that Philip V of Macedon was the son of Demetrius II; from Epidaurus, the constitutive act of the Hellenic League, of 302 B.C.; from Sparta, votives from the shrines of Orthia and Athena Chalkioikos; from Arcadia, epitaphs illustrating the formation of the Greek vocative; from Delphi, the inscriptions of the bronze Niké of Paeonius, the bronze charioteer, and the statues of Cleobis and Biton; matters relating to Delphian chronology and to the dates of Paul's stay in Corinth, and a Roman decree for the suppression of piracy, which may be the Gabinian Law of 67 B.C. or one in favor of Marius in 100-96 B.C.; at Thebes, four painted stelae, probably of warriors fallen at Delium in 424 B.C., and a decree in honor of some visiting artists who gave vocal and instrumental entertainments, ἀκρότατοι λογικάς τε καὶ δραματικάς; from Thessaly, a discussion of the influence of different strata of population on the dialect; and scattered single finds bearing on local history, organization and dialects. [To be concluded.]

RHAMMUS.—*An Unpublished Inscription.*—In *B.C.H.*, XLVIII, 1924, pp. 264-275, (pls. II-III) FERNAND CHAPOUTHIER publishes a decree found, and still lying, on the western slope of the acropolis of Rhammus. The inscription is dated by the forms of the letters in the third century B.C. At some later period it was used for other purposes, as evidenced by numerous chisel marks on the left side of the surface. A transcription, translation, and commentary of the stone is given. It is a decree in honor of a general named Apollodorus, appointed by the king Antigonus, and of an inspector Endios, appointed by the general: another decree in honor of this Endios is still extant (Wilhelm, *Beiträge*, p. 61). The king Antigonus can only be Antigonus Gonatas, who reigned at Athens from 262-61 till 240-39 B.C. It is held probable that this inscription belongs in the earlier part of his rule, and is not later than 256-55. If this date is correct, it is the only honorary inscription of the period actually extant. Its importance, therefore, as showing the organization of Macedonian rule in Attica is very great, and it also gives valuable information as to the officials of the Macedonian garrison at Rhammus. The general was nominated by Antigonus, and confirmed by vote of the Athenian assembly; he was in command of a district; the inspector was appointed by him, and was the actual commandant of the garrison under him. Other points of the inscription are commented on, to show that even under the Macedonians, certain of the rights and privileges of the old Athenian democracy were maintained.

COINS

"Athens: Its History and Coinage before the Persian Invasion."—This book by C. T. SELTMAN (Camb. Univ. Press) is critically reviewed at length by E. S. G. R(OBINSON) in *Num. Chron.*, 1924, pp. 329-341.

GENERAL AND MISCELLANEOUS

An Athenian Festival of Parasols.—The original meaning of the Athenian women's mid-summer festival, from which the month Skirophorion took its name,

became somewhat obscured, even to the townspeople, as its character changed from a festival in honor of the Eleusinian divinities to one in which Athena was most prominent. A tradition survived that the *σκίρα* were parasols, and a number of vase-paintings dated about 600-550, together with references in Aristophanes, indicate that the festival was a sort of feminine Dionysiac counterpart of the men's Thesmophoria, in which women masqueraded with false beards and at least the priestesses carried sunshades. [E. BUSCHOR, *Jb. Arch. I.*, XXXVIII/IX, 1923-24, pt. 1/2, pp. 128-132; fig.]

The Atlantic Tin Trade of the Greeks.—The scarcity of tin in Mediterranean lands makes it certain that the metal must have been obtained, from the beginning of the bronze age, either from central Europe (Bohemia and Saxony) by the old amber trade route, or from western Europe (Galicia in Spain, Brittany, and Cornwall) by sea routes extending outside the Pillars of Hercules or by land traffic across Gaul. The probable chronology of the use of these various western sources and routes, as inferred from passages in ancient writers and the evidence of the mines themselves and the distribution of coins, is sketched by M. CARY in *J.H.S.*, XLIV, 1924 (pp. 166-179). The mines in N. W. Spain were worked from very early times and again in the first century B.C. and later, being the chief source of tin during the Roman Empire. The deposits of South Brittany were worked about 500 B.C. Their product was used chiefly in western and northwestern Gaul and early in the fifth century they were superseded by those of Cornwall, which were still producing in the time of Julius Caesar and again after the third century A.D. The tin from Cornwall was collected in the island of Ictis, probably Mount St. Michael off the coast of Penzance, and exported from there. Direct traffic from Cornwall to Alexandria existed down to about 600 A.D. Tartessus in S. W. Spain was the great port of exchange for all Atlantic trade for some five hundred years, from about 1000 B.C. The first Greek navigator to pass the Pillars of Hercules was Colaeus of Samos, who was blown far out of his way to Egypt in 630 B.C. and brought back a cargo of Spanish silver. After that a regular trade with Tartessus was carried on by Phocaean merchants, and in the latter half of the sixth century, Midacritus of Phocaea was the first Greek to bring back a cargo of tin. He may really have gone to the land of its origin. The Straits were closed to trade, and Tartessus was destroyed by the Carthaginians about 500 B.C., but about 325 B.C., when Carthage was occupied at home by fears of an attack from Alexander, Pytheas of Massilia slipped through again and got as far as the stannaries of Cornwall. The conquest of Gades by the Romans in 206 opened this trade route again and it was used by Πομαῖοι, probably Italiote Greeks, chiefly for the tin coming from Spain. As to the trade by land, the Greeks of the south coast of Gaul made little progress against the stubborn resistance to foreign intercourse of the native Ligurians and Iberians, but during the fifth century, when the sea route was closed and the more friendly Celts were penetrating Gaul, they began to establish connections with the Atlantic coast, and by the third century, they were obtaining tin by a Rhone-Loire route and probably also by a Rhone-Seine route to Le Havre or Boulogne—later the regular route for the entrance of lead from Britain and other northern products—and an Aude-Garonne route between Narbo and Burdigala (Bordeaux). Corbilo, near the mouth of the Loire, was the chief Atlantic port for the tin trade. It was destroyed about 50 A.D., probably when Julius Caesar crushed the great cross-channel trading nation of the Veneti.

DELOS.—Topographical Studies.—Under the title, "Recherches sur la Topographie du Hiéron Délien," C. PICARD and J. REPLAT contribute an article (*B.C.H.*, XLVIII, 1924, pp. 217-263; 22 figs.) in which two questions are discussed. The first (pp. 217-247) deals with the original position of the famous colossal statue of Apollo, dedicated by the Naxians. Reference is made to the researches

of Courby (*B.C.H.*, XLV, 1921, pp. 174-241: see *A.J.A.*, XXVII, 1923, pp. 199-200) who believes that the present foundation of the colossus was its original position, and that Plutarch is in error when he states that the bronze palm-tree set up by Nicias in 417 B.C. fell on the statue of the Naxians and overturned it. The writers of this article argue for an original position for this statue about twenty-nine metres west of the present foundation. The exact position of the palm-tree of Nicias is known, as its base, identified by part of the dedicatory inscription, has been discovered. The evidence afforded by the mediaeval travelers, and especially by Cyriac of Ancona, shows that already before 1420 the base of the Naxian Apollo was in its present location. But the blocks of this base yield proof that at some period it was moved from an earlier position. The suggestion is then made that the colossus originally occupied a foundation still existing, about ten metres to the west of the palm-tree of Nicias, and in front of the colonnade of the Stoa erected by the Naxians in the middle of the sixth century B.C. This foundation goes back to the archaic period.* In the third century B.C., there is evidence, from the letter-forms of the present dedicatory inscription, that a restoration of the statue was made, presumably after it had been overturned by the palm-tree, and probably in its original position; while at some unknown later period it was moved to its present location. This suggested earlier location, in such close proximity to the palm, tends to vindicate Plutarch's veracity. The second question (pp. 247-263) is in regard to the tombs of the Hyperborean Virgins, mentioned in the Fourth Book of Herodotus, where their position in relation to the sanctuary of Artemis is plainly indicated. Trial excavations about four and one-half metres to the south of the previously identified Artemision revealed, at a depth of a metre from the present surface, a platform, facing west, about six metres in diameter, cut in the living rock. It is proven that this was an *abaton*, left open to the sky. The outer walls, which were probably of the Hellenistic period, have completely disappeared. The finds of sculpture and pottery associated with this place include a large male head of archaic workmanship, the front part of the torso of a Sphinx, somewhat resembling the so-called Sphinx of the Naxians at Delos, and the Sphinx of Sparta, and sherds going back to the Cycladic civilization, showing resemblances to Cretan wares of the second Middle Minoan period, or even earlier. The writers identify this place on account of its antiquity with the site of the double tomb of Hyperoche and Laodice, confirming the statement of Herodotus that it was behind the sanctuary of Artemis. The article ends with a discussion of the exact location of the earliest temple to that goddess, no definite conclusion being reached, but postponed for a future paper.

Gold Bead-seals and Signet Rings from Thisbe, Boeotia, and "Nestor's Ring" from Pylos.—In publishing for the first time thirteen remarkable engraved gold seals found in 1915, with other objects, in a Mycenaean rock-cut chamber tomb near the site of ancient Thisbe, in southern Boeotia, and the so-called "Ring of Nestor" found in 1907 in one of the great bee-hive tombs at Triphylian Pylos, which Dörpfeld identifies with the Pylos of Nestor and the *Odyssey*, ARTHUR EVANS makes their designs the basis of a wide-reaching comparison and study of other Minoan and Mycenaean works of art (gems, seals, frescoes, weapons, etc.) and finds in them important evidence as to the religious ideas and practices of the ancient Cretans. The treasure of Thisbe consists of a larger and a smaller seal ring, apparently belonging to the royal couple interred here; eight amygdaloid or sub-oval bead seals with bevelled backs, three of which are very large (37 mm. long) and with full-rounded surface, while the other five (22 mm.) are flatter; and three bead seals of the earlier, "flattened cylinder" type, of solid make and with rectangular field. The intaglios give the correct relation of right and left hands in such actions as drawing the bow and holding reins or weapons, which is reversed in the impressions. The oval seals are of one epoch, about 1500 B.C., and the five

smaller probably by the same hand. The subjects include episodes of the bull-ring, lions seizing their prey, religious scenes, and incidents from an heroic cycle. The three older pieces, dating from the early part of the sixteenth century, show a nude youth who has missed his spring in the bull-grappling test and fallen under the feet of the animal; the ritual sacrifice of a bull by a man wearing a long, knotted fillet with star-shaped ends; and a lion seizing a galloping bull. The religious character of the taurokathapsia is shown by the presence on the background of the first scene of the sacral knot, a fringed scarf knotted into a loop and sometimes, as here, shown double. These sacral knots appear on the shoulders of the Minoan goddess and her votaries, and are probably the source of the shoulder wings of Greek art, while the side wings are of Egyptian origin. The second scene shows the sequel to a successful performance of the difficult and dangerous bull-vaulting act, where the initiate, wearing priestly regalia, sacrifices the bull which he has encountered. In the third scene, rings around the forefeet and ankles of the lion indicate that he has been kept in captivity for the purpose of this contest. The design on the larger signet ring, a lion seizing a fallow deer, shows a distinct advance in composition and execution over the earlier lion scene. The smaller ring has a religious scene, in which a seated goddess, wearing a triple crown, with a seated adult attendant and two young girls, is engaged in dropping poppy seeds into the ground, as a rite of fertility. All four wear the familiar Minoan flounced skirt and tight-fitting, short-sleeved bodice which exposes the breast of the older women. Wavy lines at the top represent the sky and indicate the celestial character of the chief personage. A rayed orb and crescent, for the sun and moon, sometimes are included by such sky lines and sometimes from lack of space, occur without them. The two child companions of the goddess occur in many other representations, and may be taken as her daughters, *διάσκορπαι*, the prototype of the Dioscuri who attended Zeus when he had usurped the place of his mother. One of the smaller bead seals shows the same goddess, with triple headdress, as Lady of the Underworld. Holding poppy capsules, like her later representative Persephone, and with snakes about her neck, she is rising out of the ground between sprouting palm plants, while an elegant youth hastens to assist her. His courtly manner and elaborate costume, with tasseled fringes hanging from his headdress and the short sleeves and trousers of his tunic, suggest a priest-prince of the royal house performing a rite for the arrival of spring. On another bead seal the goddess with one of her little companions assists at a ceremony for producing rain, in which the adult attendant standing before a tree or vine, pours a liquid from a one-handled jug into a large jar, both the vessels being of metal. This is a not uncommon rite for bringing rain and is sometimes represented merely by a two-handled goblet, the sun, and a plant. On a third of these seals, the goddess as Britomartis or Dictynna is discharging an arrow into the neck of a fleeing stag, again the fallow deer of Crete, with palmated antlers. Like Artemis in Hellenistic art, the goddess is turned partly round so as to show the quiver on her back and the strap by which the sheath of her hunting knife is hung. A fourth seal has the goddess between two swans which she holds at arm's length by the neck, a motive familiar in later art. The other four seals show the adventures of the fashionably dressed young prince of the spring scene, with a spear attacking a fierce lion in its den; with a short sword or dagger charging a vigorously resisting sphinx; with bow and arrow in combat with an older man who shoots from a chariot (all these encounters taking place in wild, rocky surroundings); and lastly, surprising a pair of guilty lovers, of whom he has given the man a mortal wound and is starting in pursuit of the woman, who tries to flee, half paralyzed by fright. The last three scenes, on the three larger seals, seem to anticipate by many centuries the story of Oedipus and that of Orestes slaying Aegistheus and Clytemnestra. The "Ring of Nestor," with other relics found in

the same tomb, belongs to the transition period between MM III and LM I, the early part of the sixteenth century B.C. It is a funeral pendant, made only for suspension, as the ring is too small for a finger. An intermediate stage in the development of the ring seal from the bead seal is found in an early Minoan cylindrical signet or tubular bead, which is fashioned of ivory after a metal prototype and has the oval bezel set parallel with the axis. The large oval field of the "Nestor" ring presents an epitome of Minoan eschatology, containing no less than sixteen figures. It is divided into four compartments by the trunk and two leafless lateral branches of a huge and ancient tree, which, though it has oriental connections, can best be likened to the Ash Yggdrasil, the Tree of the World, of Scandinavian mythology. On its spreading roots lies a hound, perhaps an early Cerberus, with but one head. In the upper left hand section the goddess and her companion are seated in animated conversation, while above their heads are two fluttering butterflies and the two chrysalides from which they have just emerged, and to the right, next the tree trunk, a young woman is joyfully welcoming her lover, united to her again in the Afterworld. On the other side of the tree an enormous (comparatively) lion, as guardian of the Nether World, lies on a three-footed couch, shaded by the sacral ivy, and the two little Diascurae attend him. Many instances are at hand of the lion as guardian of the dead and companion of the Minoan goddess, later Rhea, in her chthonic aspect. The space below the spreading branches of the tree forms one continuous scene passing behind the trunk. At the right, seated on a high throne or altar and facing the left, is a griffin, the other familiar associate of the Minoan goddess, who stands behind him here. In front two griffin-headed ladies bring him offerings, while two others are conducting to him the happy pair of the upper scene. Here they are seen, again to the right of the tree, climbing joyfully up over its rough roots, the man leading his bride by the hand, while one of the strange beings beckons to them from the other side, and the other one, at the left, warns away another youth, deemed unworthy to share in the rite of initiation. All the female figures in these scenes wear the very short skirts that were the fashion in Crete in the early LM I period, and the young man wears only the loin clothing, in marked contrast to the elaborate finery of the hero of Thisbe. Both series of pictures, in their animation and emotional expressiveness, seem to refer to something more definite than an abstract symbolism, and we may note that both Minoan Crete and the Thrace from which come the stories of Orpheus and Protesilaus, touching both sides of the grave, had connections on different sides with the Anatolian world of ideas. The "Nestor" composition gives us the first glimpse into the World of the Hereafter, as conceived by the Minoans. In style and character it so closely resembles the miniature frescoes of the Cnossian palace as to suggest an original in that medium, and an attempt has here been made, on a colored plate, to give it that effect. (J.H.S., XLIV, 1925, pt. 1, 1-75; 5 pls., 1 colored; 57 figs.).

Small Greek Antiquities.—In *B. Metr. Mus.*, XIX, 12, 292-296 (6 figs.), G. M. A. R(ICHTER) discusses a group of small, dainty articles recently acquired by the Museum. The collection includes eight stone vases, cups and bowls, a ladle, and a jug illustrating the Cretan art of carving stone vases, an art traceable to Egypt and which was supplanted by pottery and bronze work. From Crete also came a fine bronze double axe, a primitive bronze female statuette in the attitude of adoration, a fish-hook of the same shape as the one used to-day, and a hematite celt of the Stone Age, proving that Crete was inhabited in Neolithic times. Dark blue glass ornaments of the Late Minoan period in the form of curls and spirals with holes for stringing are identified as having formed a head decoration. Another set of light blue glass ornaments with holes for stringing are also explained as having been used as a straight band or diadem. An archaic Greek terracotta

frieze shows sphinxes and chariots arranged in repeat. Archaic Greek art is further illustrated in four terracotta moulded vases, two in the form of male heads, one in the form of two female heads arranged back to back, and the fourth in the form of a foot with sandal, fine examples of their types. A small terracotta egg may be a loom weight. A female head, the upper part of a terra-cotta doll, and the head of an elderly man in relief, from Memphis, are additional examples of Greek terracotta work. A helmet-shaped lamp is a piece of Roman terracotta. A small head of a youth 5.1 cm. h. belongs to the late archaic period. It is not broken off from a statue but is finished off at the bottom and possibly had been placed upon a staff. Three bronze statuettes of good quality are a dancing Satyr 11.4 cm. h., a small Roman boy 10 cm. h., and a Lar with drinking horn and patera 12.9 cm. h. Also some remains of a small marble statuette are included, four attractive heads showing a youth, an Apollo, a Heracles, and a man with parted hair like that of the younger Faustina and belonging to the second century A.D.

ITALY

SCULPTURE

A Roman Relief in Vienna.—In *Jh. Oest. Arch. I.*, XXI-XXII, 1924, pp. 229-250 (3 pls.; 9 figs.), J. ZINGERLE publishes a rudely cut Roman relief found behind the arsenal in Vienna in 1891. It is interesting because it represents the combat between Heracles and Cynetus, a rare subject in reliefs. It dates from the third century A.D.

The Stucco Reliefs of the Underground Basilica near the Porta Maggiore.—In an article by E. STRONG and N. JOLIFFE, in *J.H.S.*, XLIV, 1924, pt. 1 (pp. 65-111; 3 pls., 17 figs.), a brief account of the basilica itself is followed by a description of the subjects and eschatological symbolism of the reliefs with which the entire interior of the building except the mosaic floors is covered, and their connection with Greek and other mystery religions, with frequent references to the use of similar motifs on tombs, sarcophagi, and monuments in Italy, the Rhineland, and elsewhere. The building dates from the first century A.D., probably from the reign of Claudius, and is the first complete evidence of the pre-Christian religious use of the basilica form, with nave, aisles, barrel vaulting, apse, and square atrium, on an east and west axis. It is a real hypogaeum, constructed from above, the walls and piers being made by pouring concrete into deep trenches and pits dug in the solid earth, which served also before removal, as a mould for the concrete arched roof. A descending corridor along the outside of the north wall, with a light well, leads to a door in the side of the atrium, but its upper entrance has not been found. Daylight and air came only through an open shaft in the ceiling of the atrium over an impluvium. This was evidently the secret place for meeting, worship, and initiation of a wealthy and cultivated sect of neo-Pythagoreans. There are traces of an altar, a throne in the apse, chains for the suspension of lamps under the arches, and stands of some sort before the pillars, but as no articles of any kind have been found in the earth which filled the hall to two-thirds of its height when discovered in 1917, the place must have been abandoned deliberately and all furniture removed, perhaps after no long use. In the atrium the stucco is partly in color and partly in relief, but in the main hall, gleaming white and covered with reliefs in friezes and panels of various shapes. The subjects, of which at least one hundred and seventeen have been counted, are scenes and figures of mythology, ritual, and everyday life, all having symbolic meaning and combining to give a complete picture of the progress of the soul to union with Divinity in the Afterworld. Among the stories of mythology here used to teach religious truths or as symbols of death, purification, the voyage of the soul, entrance into a new world, or the contrasted lots of initiate and uninitiate, are

the Rape of Ganymede and of the two Leucippids, Jason at Colchis and Heracles with a Hesperid, Orpheus and Eurydice, Heracles rescuing Hesione and Alcestis, Orestes and Iphigenia with the Palladium, the sacrifice of Iphigenia, Electra and Orestes, the Apotheosis of Heracles, Demeter and Triptolemus, Phaedra and Hippolytus, Apollo and Marsyas, while Achilles with the Centaur, a marriage, children's games, the palaestra and schoolroom, represent the training and preparation of the soul in this life. There are scenes of divination, magic, and initiation, ecstatic dances of maenads (the initiate) and mourning Danaids (the uninitiate), erotes, victories, griffins, sphinxes, orantes with outspread arms (perhaps personified figures of Attis), Egyptian scenes with pygmies, scenes with the liknon or vannus, the phallus, the lyre, a flaming altar, a serpent, a key, the vase of life, and many other sacred objects. On the walls is a series of landscapes and sacred groves with trees, pillars, and statues, usually female, in enclosures. In the apse is a sort of Last Judgment. Over a stormy sea, the soul, as a woman closely veiled, steps down from a rocky promontory on the right, gently pushed on by an Eros, while before her a Triton holds out a sheet folded boat shape, as if to receive her. Opposite and above, Apollo holds out a welcoming hand, while below him sits a dejected male figure, probably typifying the uninitiate. This scene, with which the story of Sappho and Phaon may be compared, is a reminiscence of ordeal and purification by water and by air.

Studies in Roman Portraiture.—In *Jh. Oest. Arch. I.*, XXI–XXII, 1924, pp. 172–202 (22 figs.), A. HEKLER points out that a criterion for dating Roman portrait heads is to be found in the historical reliefs which extend in an almost unbroken series from Augustus to Marcus Aurelius. Further evidence may be found in the treatment of the hair and the shape of the bust. With these points in mind he attempts the identification of several Roman portrait heads.

COINS

Hoard of Roman Coins from Plevna.—In 1922 a Bulgarian peasant digging in his vineyard near Plevna uncovered an earthen pot containing 4033 *denarii* and *Antoniniani*. Of these, 3296 have been examined at the British Museum. They range in date from Domitian to Hadrian. The largest number of a single reign was 1173 *Antoniniani* of Decius. Questions of mints, types, and titles, and the bearing of the newly disclosed facts on the history of the times, are carefully discussed by H. MATTINGLY and F. S. SALISBURY in *Num. Chron.*, 1924, pp. 210–238 (2 pl.).

Roman-Campanian Coinage and the Pyrrhic War.—H. MATTINGLY adds to his remarkable services in the reconstitution of our history of Roman coinage by an article with this title in *Num. Chron.*, 1924, pp. 181–209 (pl.). It has been customary (with Mommsen) to assign Romano-Campanian coinage to a Capuan mint, and the period soon after 340 B.C. This is untenable. Apart from a few issues of yet later date, it is all of the period of the war with Pyrrhus (282–272 B.C.), when Carthage was friendly to Rome, and furnished probably bullion and certainly some types. This new dating affects also our judgment of certain other problems of early Roman coinage. The *libral as* at Rome was probably not coined earlier than about 300–290 B.C. Its weight fell more or less gradually. Perhaps the semissal standard dates from 268 B.C., when the *denarius* was introduced. Between 268 and the end of the First Punic War it fell to a sextantal standard. Silver played little part in coinage at Rome till the Second Punic War when the *denarius* was issued in mass and became predominant in Italy, the way to its supremacy having been paved by the *quadrigatus* and *victoriatus* of the southern coinage.

Unpublished Coins of Magna Graecia.—A. H. LLOYD publishes twenty-one

coins from his collection. They pertain to various cities of Magna Graecia. None of them are unique, but they contribute toward more precise knowledge of the issues concerned (*Num. Chron.*, 1924, pp. 129-140; 2 pl.).

GENERAL AND MISCELLANEOUS

Metulum and Fluvius Frigidus.—In *Jh. Oest. Arch. I.*, XXI-XXII, 1924, Beiblatt, cols. 479-494 and 507-510, G. VEITH defends against W. SCHMIDT and K. PICK his identification at Metulum as the modern Viničica, and the site of the battle of Theodosius at the Fluvius Frigidus as being at Duplje. *Ibid.*, cols. 495-507, W. SCHMIDT urges objections to these identifications.

Prosopographical Notes.—In *Jh. Oest. Arch. I.*, XXI-XXII, 1924, Beiblatt, cols. 425-478, E. GROAG publishes prosopographical notes on Sergius Octaevius Laenas Pontianus, Sex. Quinctilius Valerius Maximus, and M. Plantius Silvanus.

EARLY CHRISTIAN, BYZANTINE, AND MEDIAEVAL ART

EGYPT

Early Christian Weavings from Egypt.—In *B. Meir. Mus.*, XX, 2, 55-58, MAURICE S. DIMAND discusses a group of woolen stuffs illustrating the art of weaving in late Roman and early Christian times. The early Christian art freely depicted scenes from the life of Christ both on tapestry and silks. Fragments of a woven band, probably at one time the border of a garment which may have been worn by a priest, are assigned to the fifth or sixth century. In these pieces the scenes show: the Annunciation, the Nativity, Bathing, the Adoration of the Shepherds. Textiles woven by the draw-loom method were associated by Pliny with Alexandria, and are called *polymita*. Rome and Egypt did not know this method before the first century B.C., though China practiced it long before. The expensiveness of silk explains why at first wool was employed in draw-loom weavings.

BULGARIA

Bulgarian Funeral Churches.—In *Bulletin de l'Institut archéologique bulgare* I, 1 (1921-22), pp. 103-135, A. GRABAR describes three Bulgarian churches, one at Bachkovo, the second at Boyana and the third near Stanimaka, of which the first and second are definitely known to be mortuary churches and the third approaches the same type. They are two stories in construction and the lower story was used for the departed while the upper served as a chapel for the requiems. In their shape and form they approximate the two-storied Armenian churches described by STRZYGOWSKI, and in many details they represent an even more archaic stage, since the former, at least, dates from the eleventh century. The author lists distinct Caucasian, Armenian, and Georgian borrowings in this church, and shows how these tendencies exist along with distinct marks of Constantinople construction.

The Nature and Development of Bulgarian Religious Architecture.—In *Bulletin de l'Institut archéologique bulgare* I, 2 (1921-22), pp. 186-205, ANDRE PROTITCH describes the different types of Bulgarian churches known to us and finds three distinct types: The first type is the Bulgarian basilica (ninth to the twelfth century) representing the great basilica, long and elaborate, largely influenced by Anatolian and Armenian traditions. The second type (end of the ninth to the fourteenth century) is the small semi-basilica with a dome. This type was produced under Byzantine and Salonica influences and sought for an impression of intimacy rather than grandeur. Height predominates over length. The structures are very varied, since many of them were burial chapels. The most widespread type has three aisles and a transept with columns and pillars or a dome

and tower. The third type (fourteenth to the nineteenth century) is influenced by the basilicas of Mount Athos and was developed really after the seventeenth century. The best example of this type is now the Church of St. John at Rilo from the first half of the nineteenth century, and this furnishes the model for many modern Bulgarian churches.

PATLEJN.—*History of the Establishment of the old Bulgarian Monastery.*—In *Bulletin de l'Institut archéologique bulgare I*, 2 (1921-22), pp. 146-162, V. N. ZLATARSKI takes up the various accounts preserved concerning the Monastery near Patlejn in the neighborhood of Preslav, and concludes that there was a fortress on this site from the date of the foundation of Preslav, 821. This was turned into a monastery by Tsar Boris, who became a monk in 889 and died here. After the Hungarian invasion of 895, in which the church was ruined, Tsar Simeon restored it between 906 and 907. The monastery seems to have been dedicated to St. Pantaleimon, and hence gave the name Patlejn to the surrounding region. The author supposes also that here was the seat of the earliest Slav-Bulgar literary school of the pupils of Methodius. Despite its importance the monastery was pillaged at the end of the tenth century and was not restored.

RENAISSANCE ART

GENERAL AND MISCELLANEOUS

A Collection of Pewter Ware.—In *B.A.I.*, XIX, 4, 42-45, H. S. discusses a collection of pewter in the Art Institute including a considerable variety of articles, some of them rare and beautiful specimens of the last three centuries. A paten in the Renaissance style belongs to the late sixteenth century and was probably made at Nuremberg. In its centre is depicted the Resurrection. The border has a series of medallions with the Twelve Apostles. Pewter, because of its cheapness, often was substituted for gold and silver in ecclesiastical articles as well as in secular ware. The articles in this collection belong mainly to the eighteenth century. There is a fine Scottish communion set dated 1794. Design and form are well executed in lamps, ink-stands, jugs, drinking vessels, and sets of measures. Pewter ware declined with the appearance of cheap pottery in the nineteenth century. Its use continued in the rural communities. American pewter followed English standards.

ITALY

Portraits by Parmigianino.—In *Burl. Mag.*, XLVI, 1925, pp. 87-93 (2 pls.), L. FRÖHLICH-BUME publishes some portraits by Parmigianino which he omitted in his monograph on the artist. Most important among them is one which is probably to be identified as the likeness of Isabella d'Este. Here Parmigianino shows his careful, beautiful technique at its best.

GREAT BRITAIN

Lost Fifteenth-Century Tapestries.—In *Burl. Mag.*, XLVI, 1925, pp. 35-42 (3 pls.), H. C. MARILLIER discusses the tapestries which hung until 1800 in the Painted Chamber, Westminster. At that time, almost wholly unappreciated, they were stripped from the walls and sold for next to nothing, to vanish soon from all knowledge. A protest published by an architect in the *Gentleman's Magazine*, 1799, and a series of drawings by the same author (recently acquired by the Victoria and Albert Museum) give us a very good idea of some of the pieces. The principal subject was the "Great History of Troy," based on the late twelfth-century *Roman de Troie* of Benoît de Saint-More. The date of the tapestries was the late fifteenth century. Other sets representing the same subject are here discussed.

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